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Bruno

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(54) **METHODS AND COMPOSITIONS OF DNA LIGANDS FOR ARTHROPOD-BORNE PATHOGEN DETECTION AND PROPHYLAXIS OR THERAPY**

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Related U.S. Application Data

(63) Continuation of application No. 13/199,082, filed on Aug. 18, 2011, now Pat. No. 8,648,181.

(60) Provisional application No. 61/401,731, filed on Aug. 18, 2010.

(51) **Int. Cl.**

C07H 21/04	(2006.01)
C12N 15/115	(2010.01)

(52) **U.S. Cl.**
CPC ***C12N 15/115*** (2013.01); ***C07H 21/04*** (2013.01); *C12N 2310/16* (2013.01)
USPC **536/23.1**

(58) **Field of Classification Search**
None
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2012/0123096 A1* 5/2012 Bruno et al. 530/363

* cited by examiner

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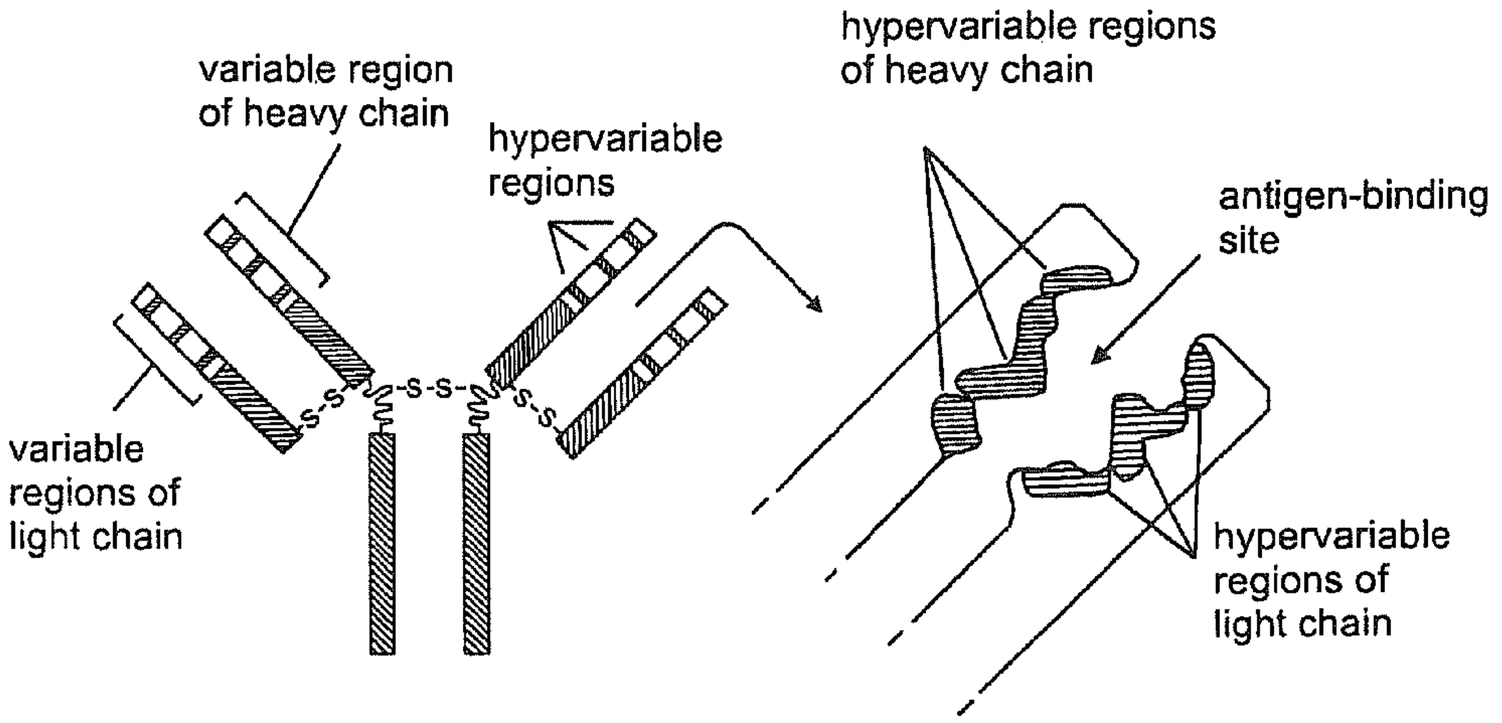
(57) **ABSTRACT**

Specific DNA ligand sequences for binding various arthropod-borne pathogens including arboviruses, *rickettsia* and parasites are described. Each of these sequences or their linear, two- and three-dimensional linked sequences can function in varying assay and sensor formats with varying degrees of success. Linkage of the whole or partial DNA sequences (putative binding sites) can be used to enhance specificity and affinity towards complex targets, thereby improving assay selectivity and sensitivity in many instances. In addition, the DNA sequences may bind and neutralize or prevent infection from arthropod-borne viruses, *rickettsia* and *Leishmania* or other parasites.

3 Claims, 14 Drawing Sheets

A. Antibody Hypervariable Regions Linked Together



B. Multi -Aptamer or Linked Aptamer Binding Pockets

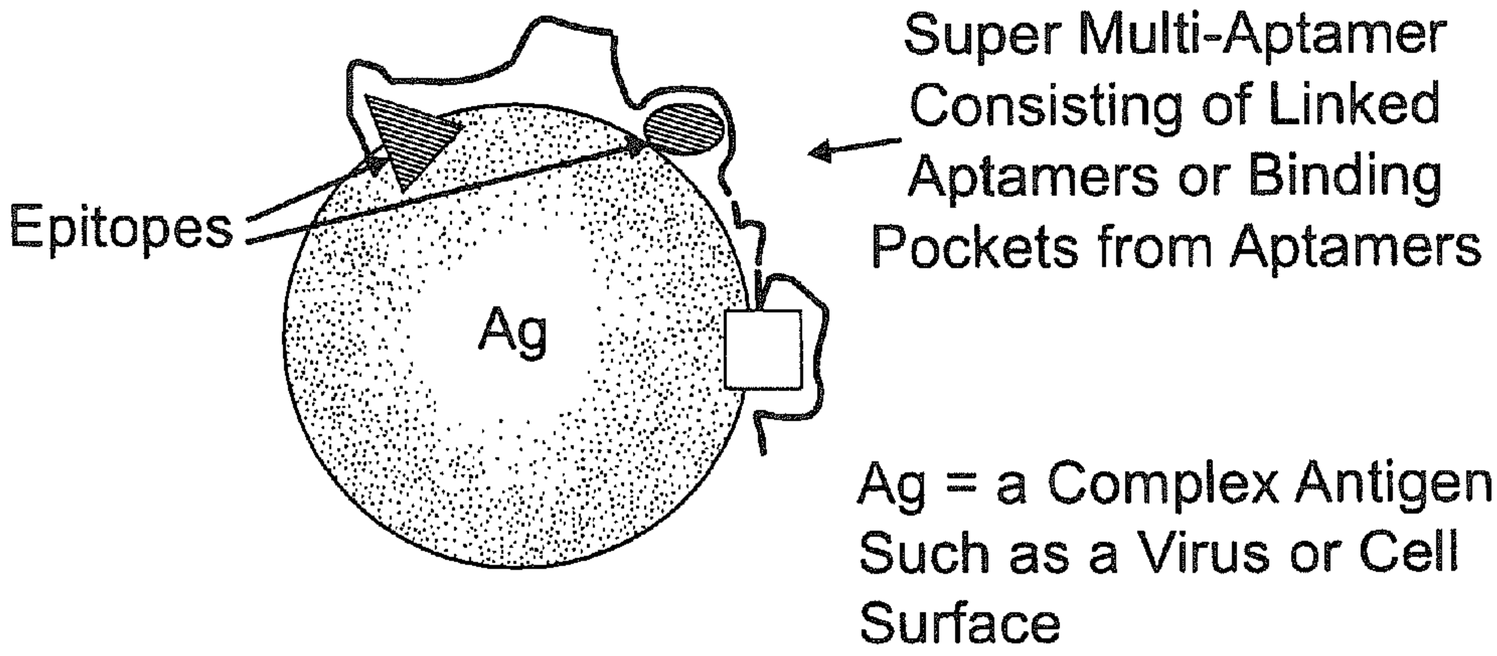


Fig. 1

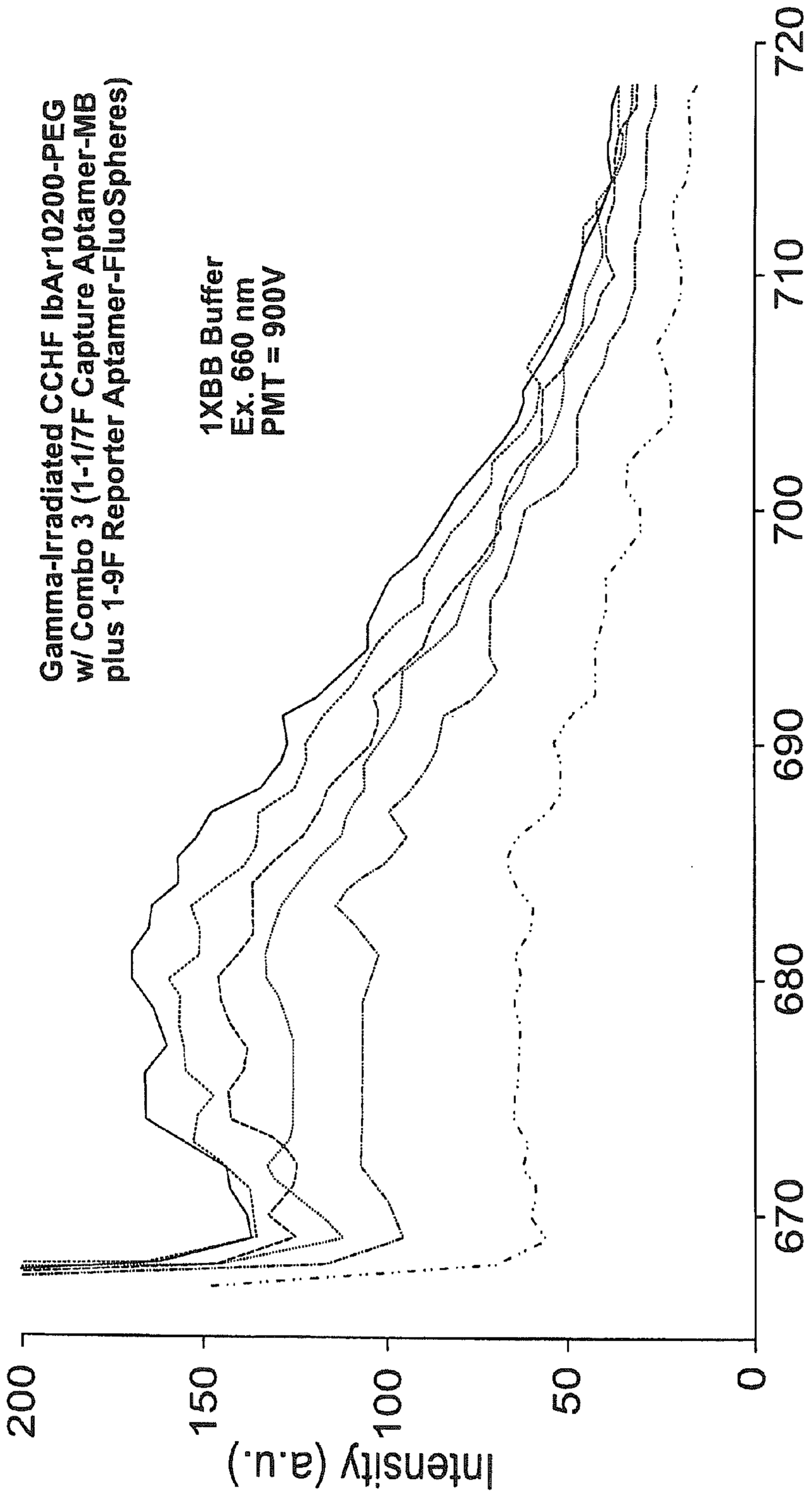

Gamma-Irradiated CCHF IbAr10200-PEG
w/ Combo 3 (1-1/7F Capture Aptamer-MB
plus 1-9F Reporter Aptamer-FluoSpheres)
1XBB Buffer
Ex. 660 nm
PMT = 900V
Intensity (a.u.)
200
150
100
50
0
Wavelength (nm)
670
680
690
700
710
720

Fig. 2

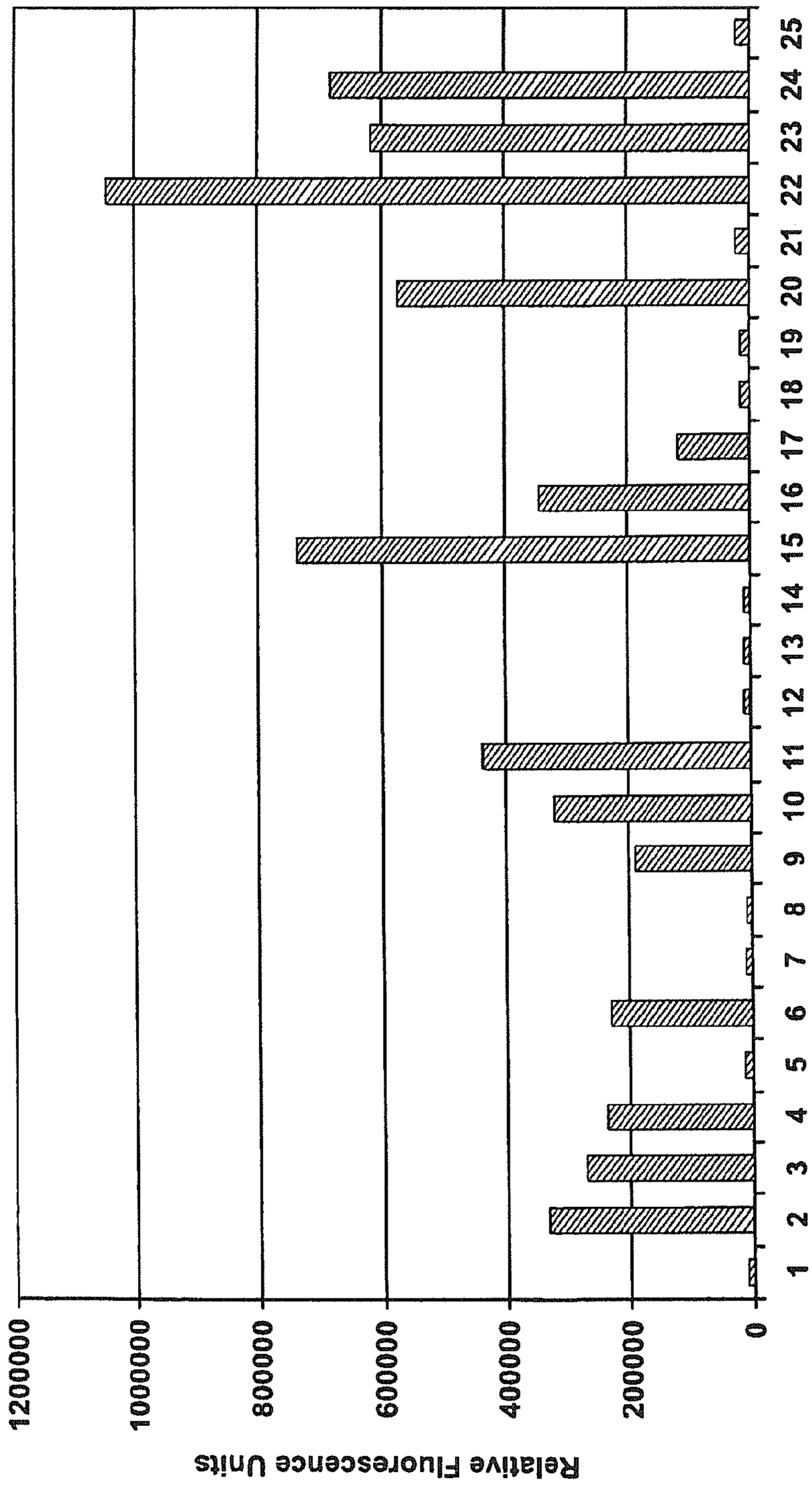

CCHF Screen with Fluorometer
Relative Fluorescence Units
1200000
1000000
800000
600000
400000
200000
0
Matrix Sample Number
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

Fig. 3

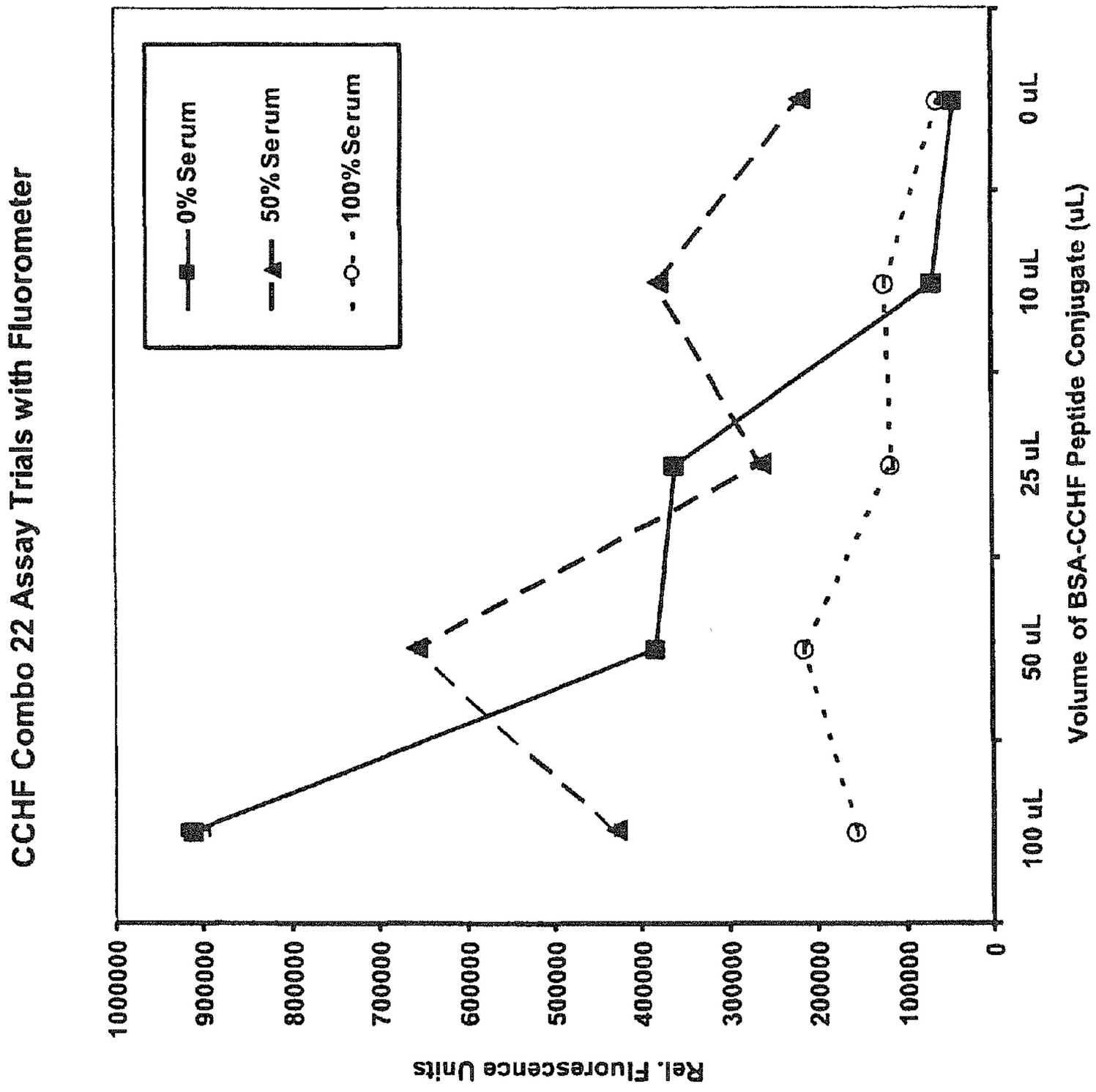
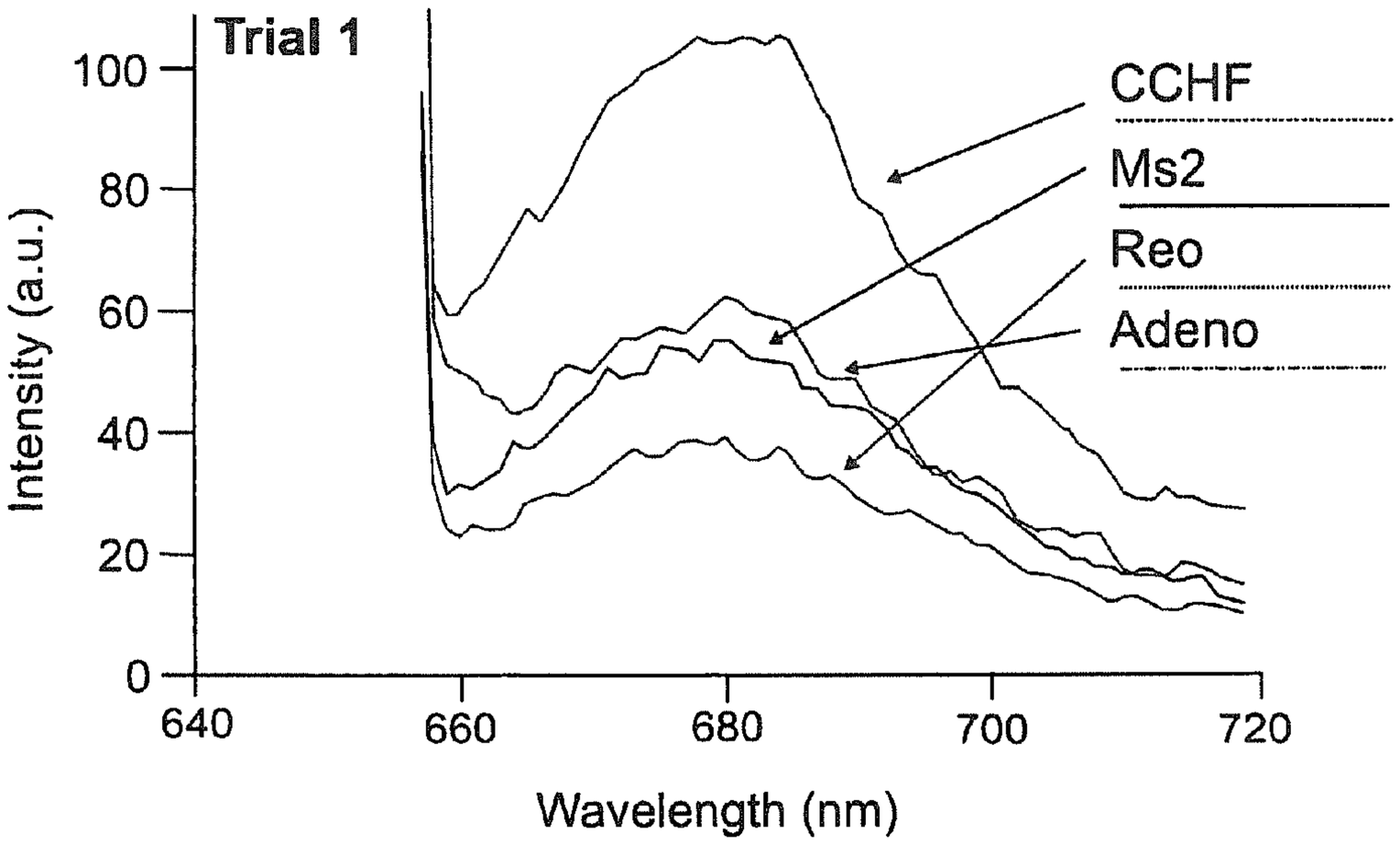

CCHF Combo 22 Assay Trials with Fluorometer
0% Serum
50% Serum
100% Serum
Rel. Fluorescence Units
1000000
900000
800000
700000
600000
500000
400000
300000
200000
100000
0
100 uL
50 uL
25 uL
10 uL
0 uL
Volume of BSA-CCHF Peptide Conjugate (uL)

Fig. 4


Trial 1
Intensity (a.u.)
100
80
60
40
20
0
640
660
680
700
720
Wavelength (nm)
CCHF
Ms2
Reo
Adeno

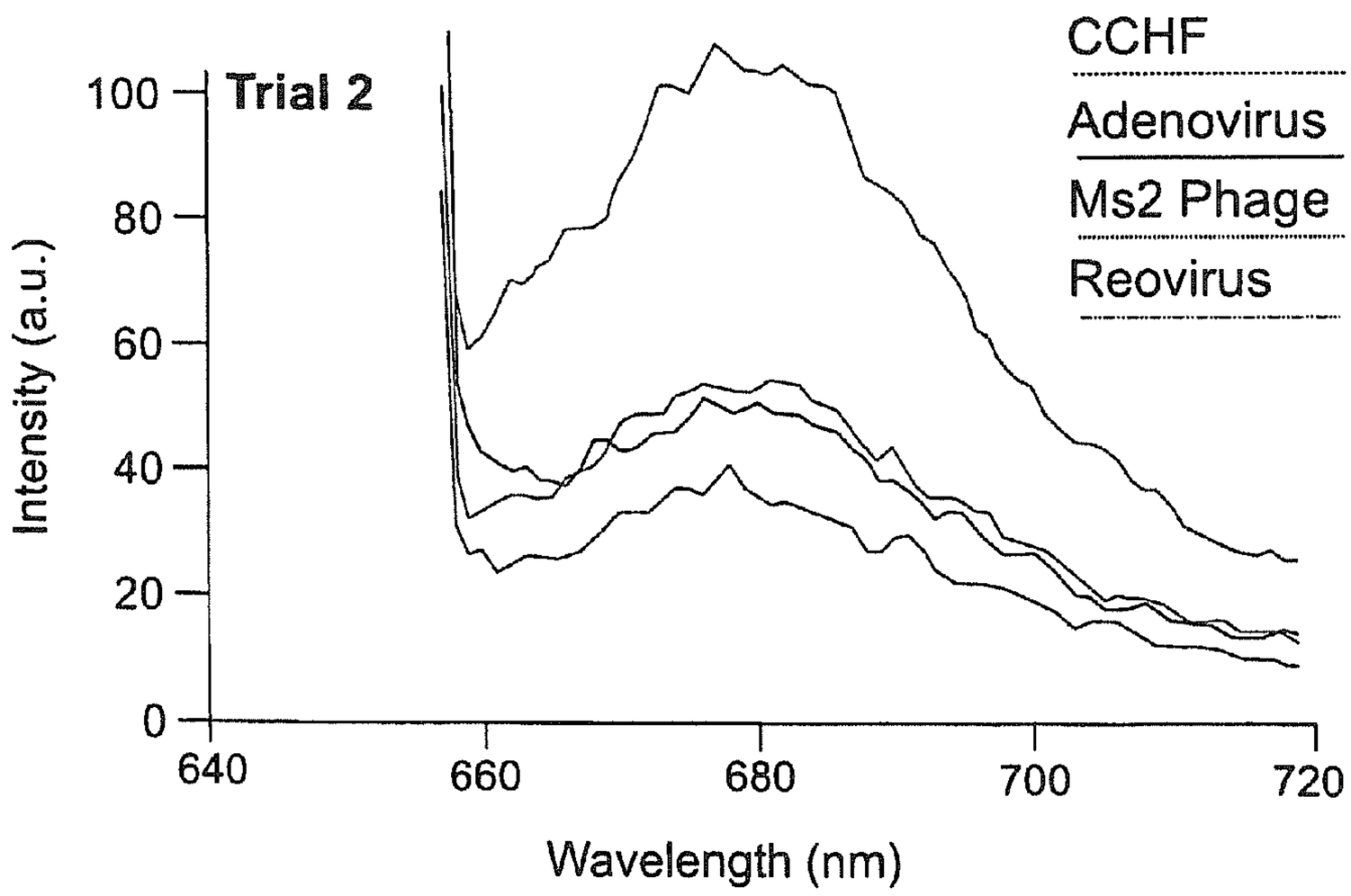

Trial 2
Intensity (a.u.)
100
80
60
40
20
0
640
660
680
700
720
Wavelength (nm)
CCHF
Adenovirus
Ms2 Phage
Reovirus

Fig. 5

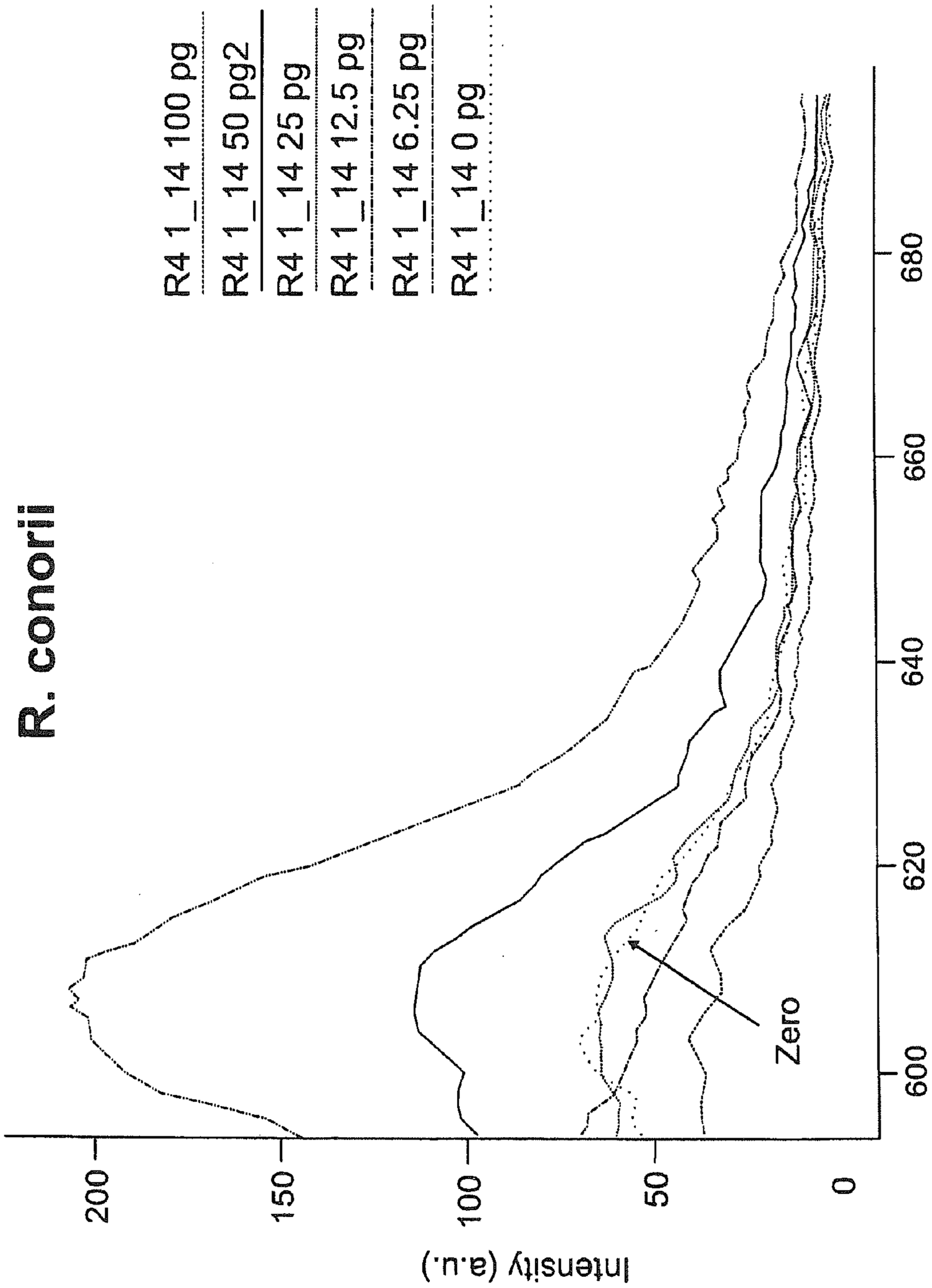

R. conorii
R4 1_14 100 pg
R4 1_14 50 pg2
R4 1_14 25 pg
R4 1_14 12.5 pg
R4 1_14 6.25 pg
R4 1_14 0 pg
Zero
Intensity (a.u.)
200
150
100
50
0
620
640
660
680
600
Wavelength (nm)

Fig. 6A

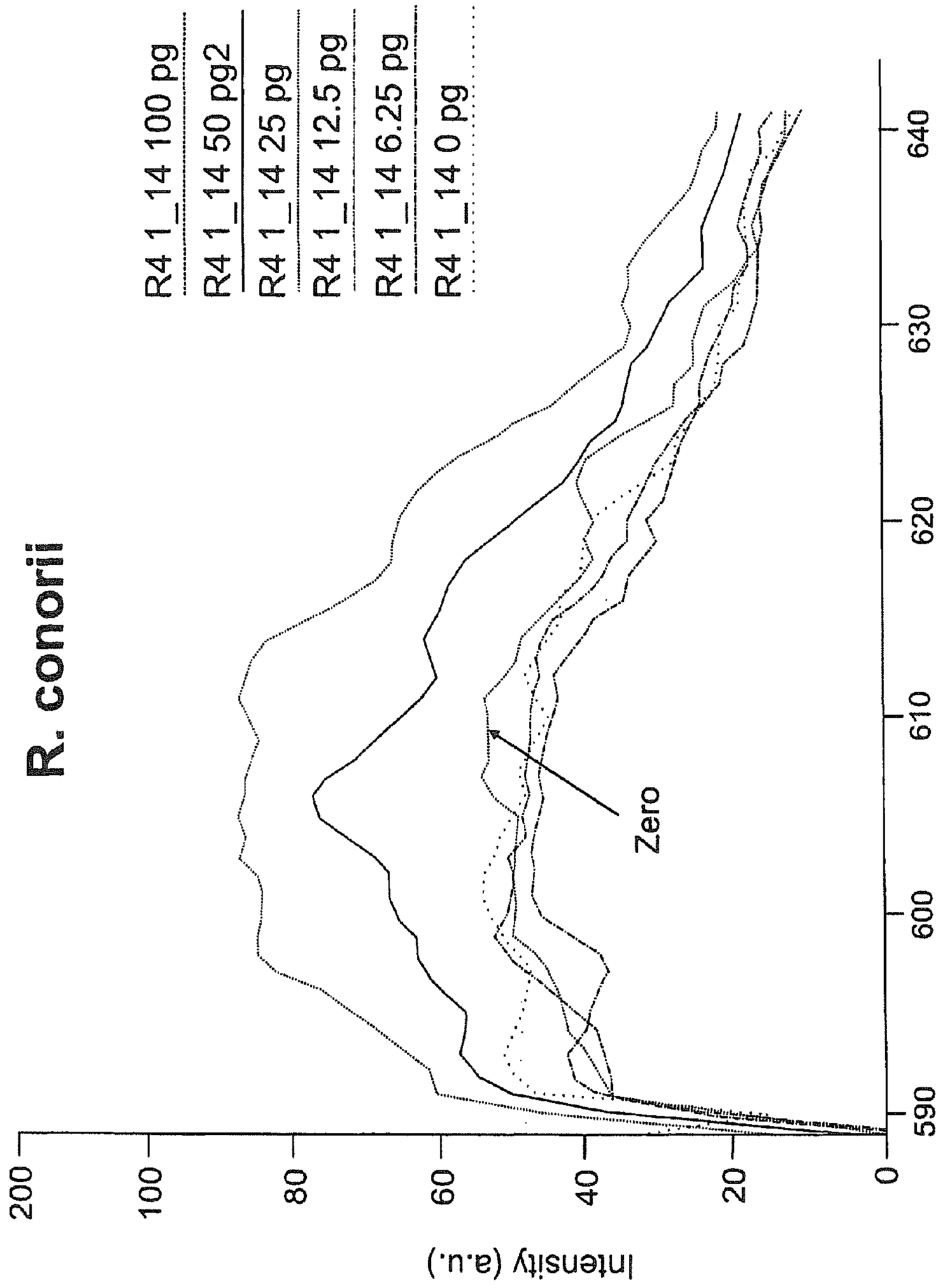

R. conorii
R4 1_14 100 pg
R4 1_14 50 pg2
R4 1_14 25 pg
R4 1_14 12.5 pg
R4 1_14 6.25 pg
R4 1_14 0 pg
Zero
Intensity (a.u.)
0
20
40
60
80
100
200
590
600
610
620
630
640
Wavelength (nm)

Fig. 6B

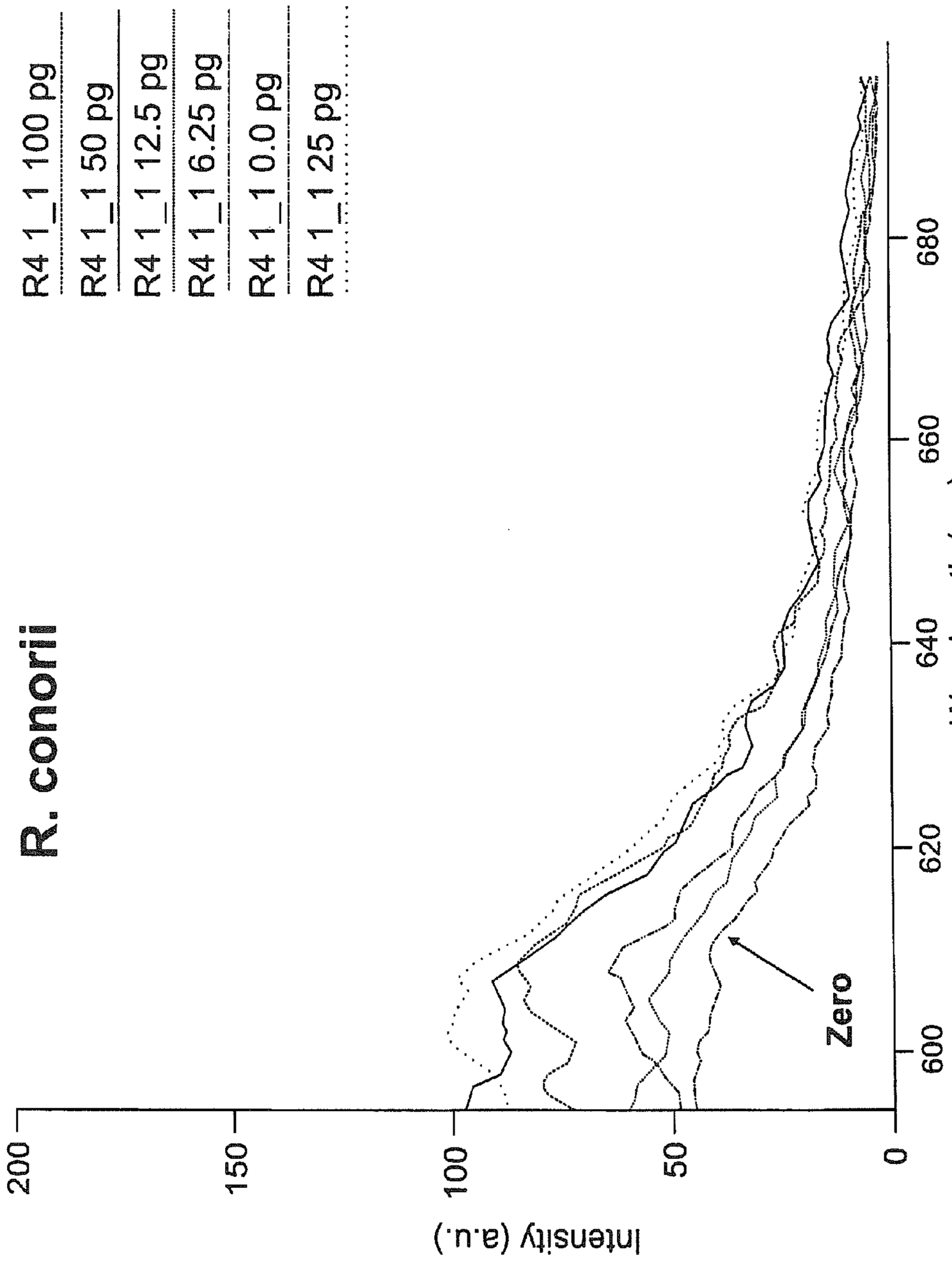

R. conorii
R4 1_1 100 pg
R4 1_1 50 pg
R4 1_1 12.5 pg
R4 1_1 6.25 pg
R4 1_1 0.0 pg
R4 1_1 25 pg
Intensity (a.u.)
200
150
100
50
0
600
620
640
660
680
Wavelength (nm)
Zero

Fig. 6C

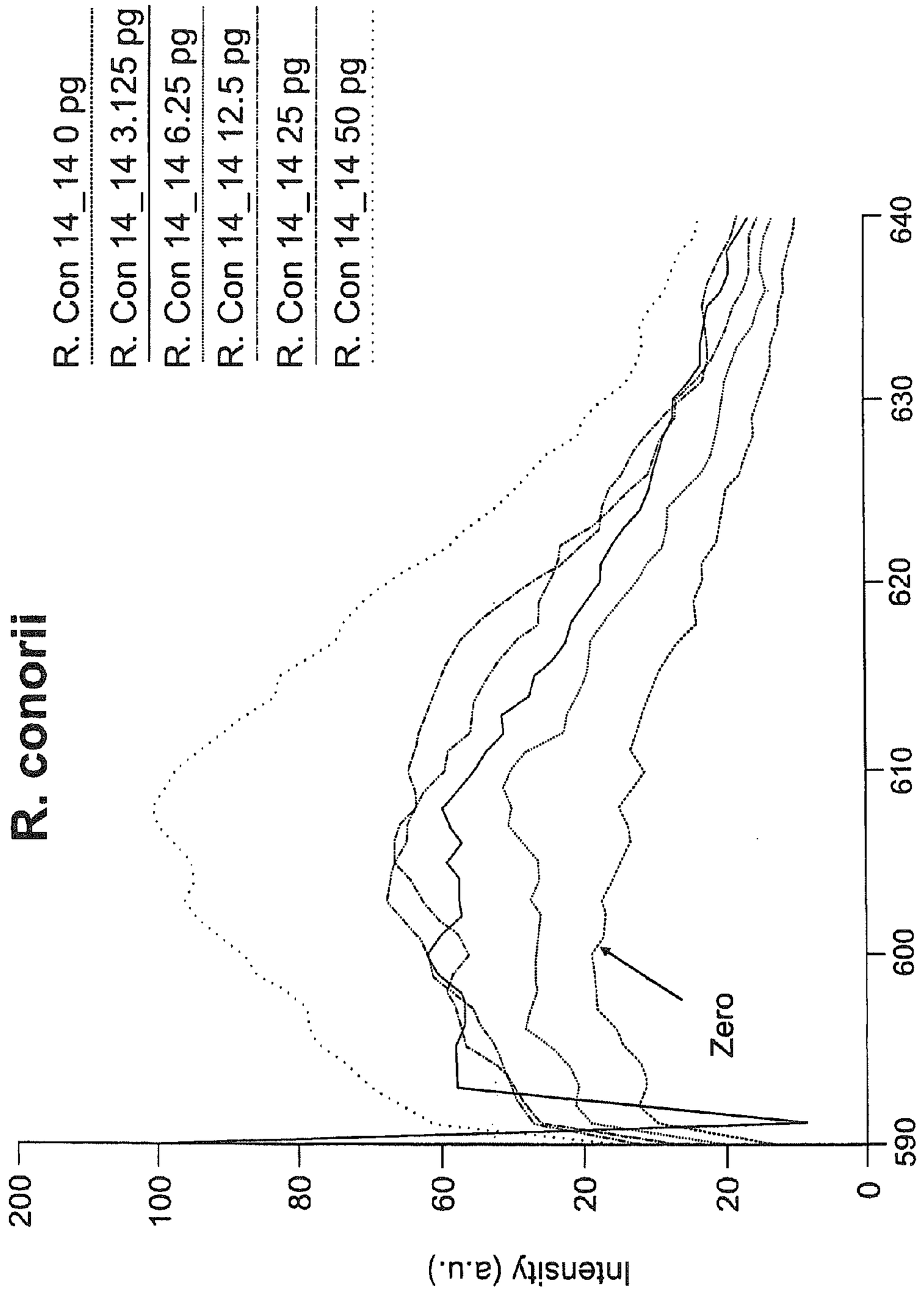

R. conorii
R. Con 14_14 0 pg
R. Con 14_14 3.125 pg
R. Con 14_14 6.25 pg
R. Con 14_14 12.5 pg
R. Con 14_14 25 pg
R. Con 14_14 50 pg
Zero
Intensity (a.u.)
200
100
80
60
20
20
0
590
600
610
620
630
640
Wavelength (nm)

Fig. 6D

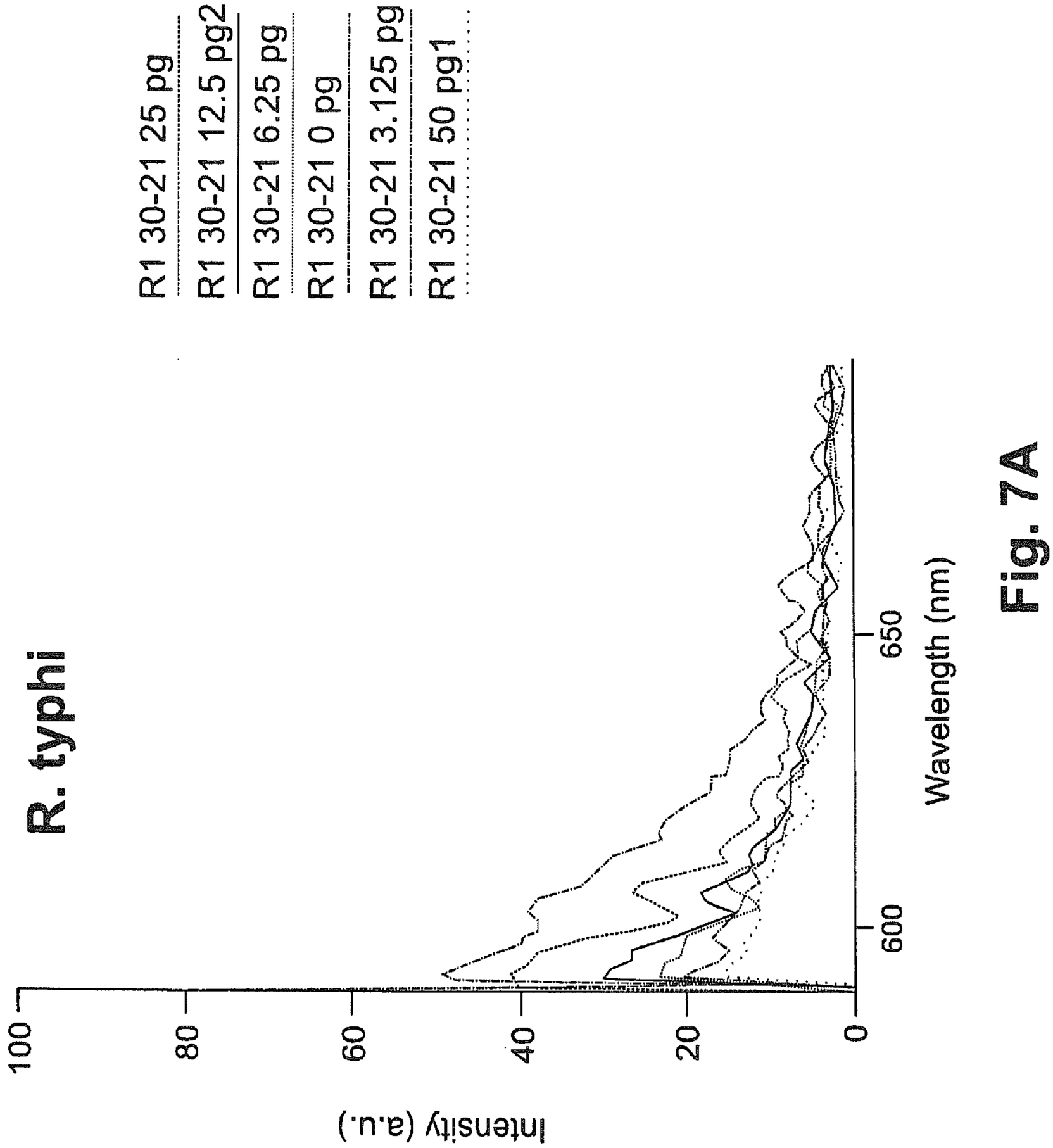

R. typhi
R1 30-21 25 pg
R1 30-21 12.5 pg2
R1 30-21 6.25 pg
R1 30-21 0 pg
R1 30-21 3.125 pg
R1 30-21 50 pg1
Intensity (a.u.)
100
80
60
40
20
0
650
600
Wavelength (nm)

Fig. 7A

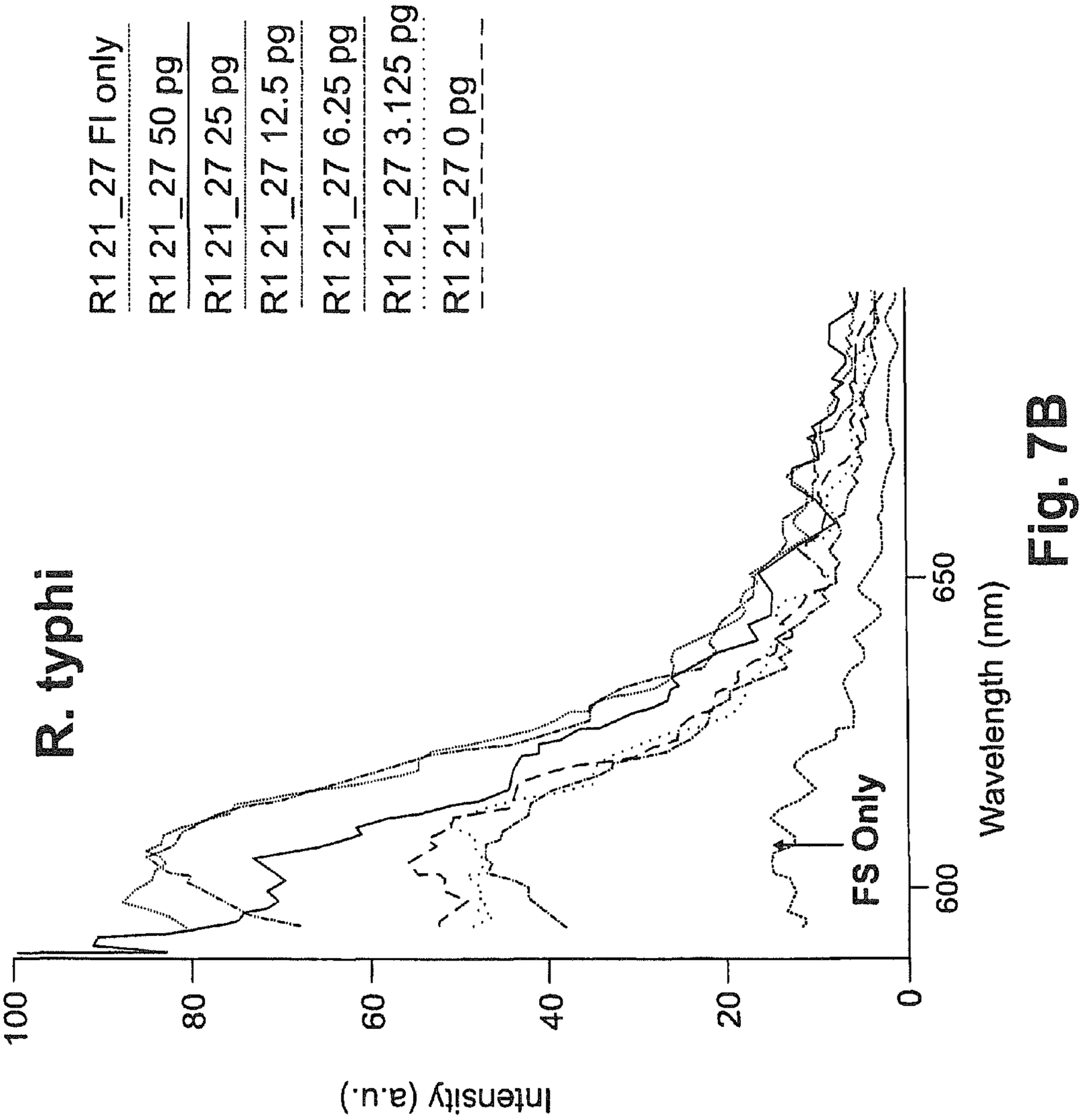

R1 21_27 FI only
R1 21_27 50 pg
R1 21_27 25 pg
R1 21_27 12.5 pg
R1 21_27 6.25 pg
R1 21_27 3.125 pg
R1 21_27 0 pg
R. typhi
FS Only
600
650
Wavelength (nm)
100
80
60
40
20
0
Intensity (a.u.)

Fig. 7B

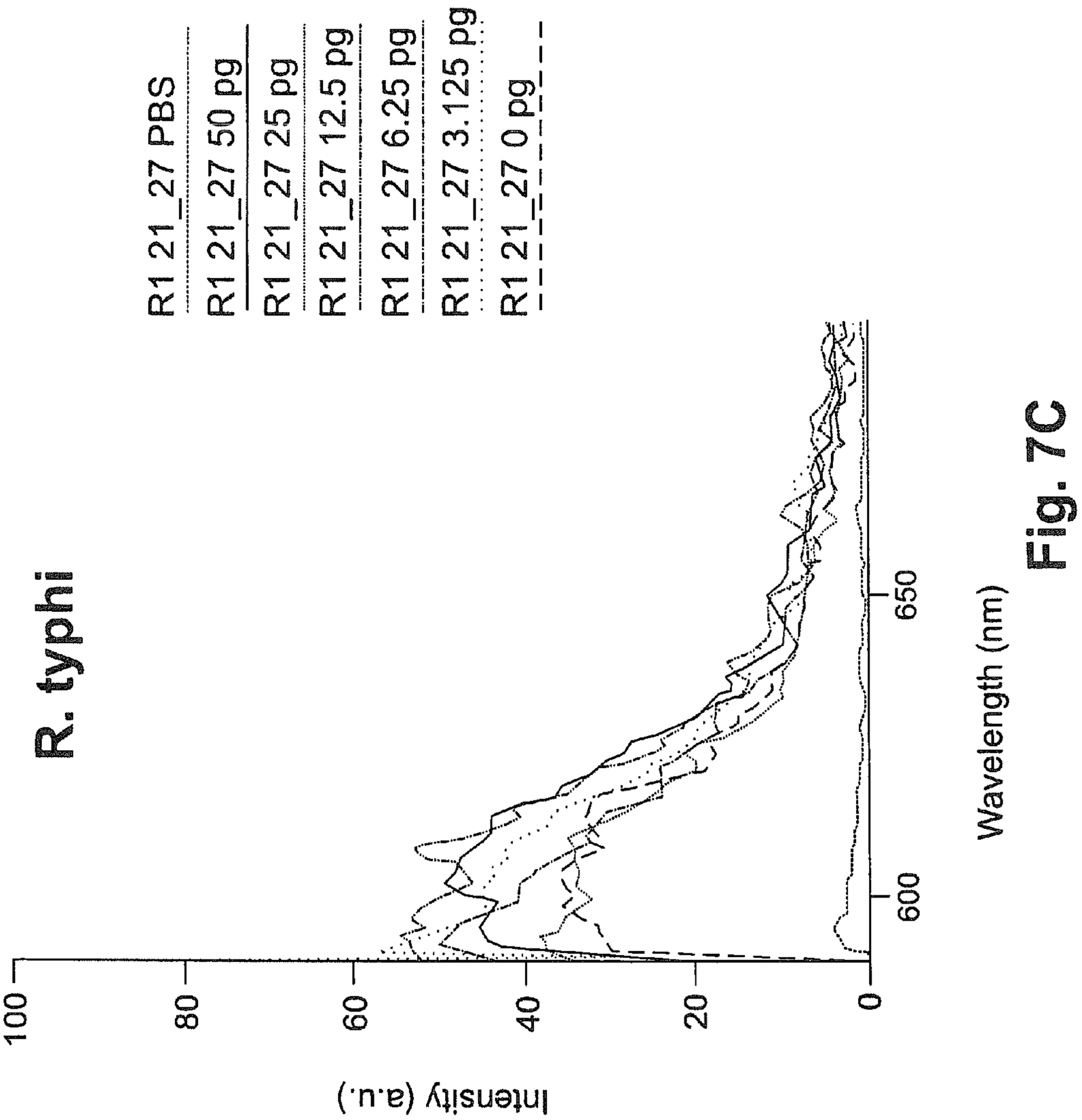
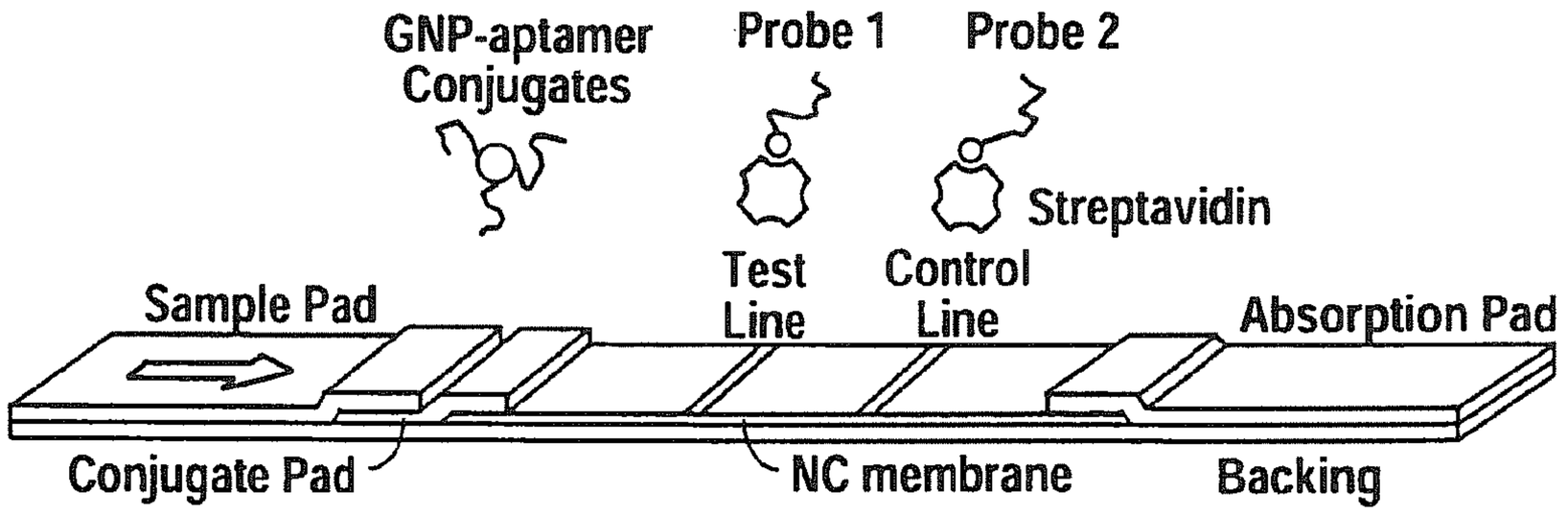

R1 21_27 PBS
R1 21_27 50 pg
R1 21_27 25 pg
R1 21_27 12.5 pg
R1 21_27 6.25 pg
R1 21_27 3.125 pg
R1 21_27 0 pg
R. typhi
100
80
60
40
20
0
Intensity (a.u.)
600
650
Wavelength (nm)

Fig. 7C

General DNA Ligand
or
Aptamer Lateral Flow Test Strip Format



GNP; Gold Nanoparticle
NC; Nitrocellulose

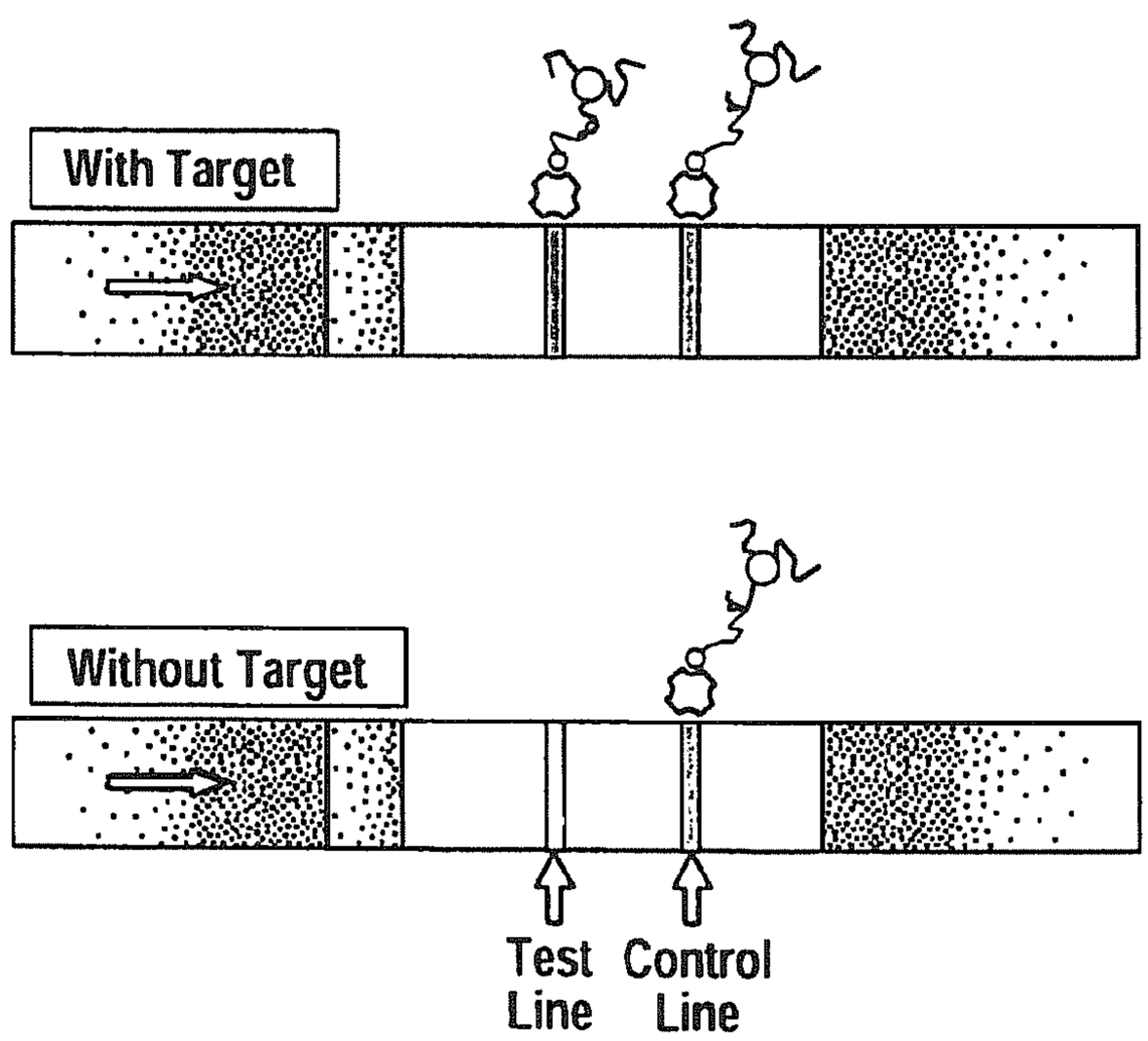


Fig. 8

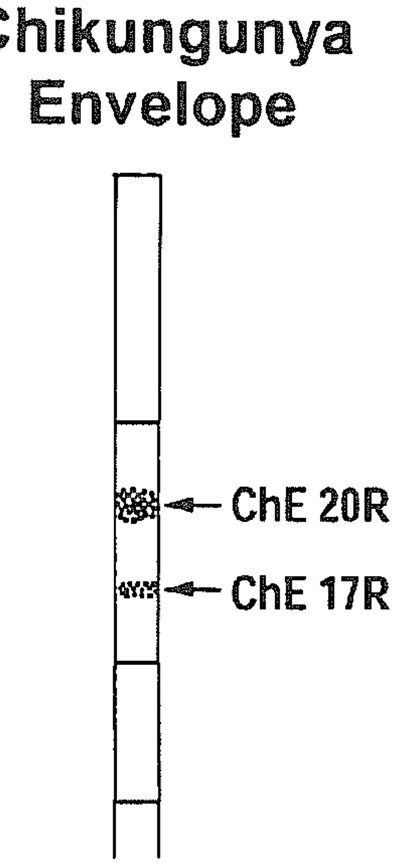


Fig. 9A

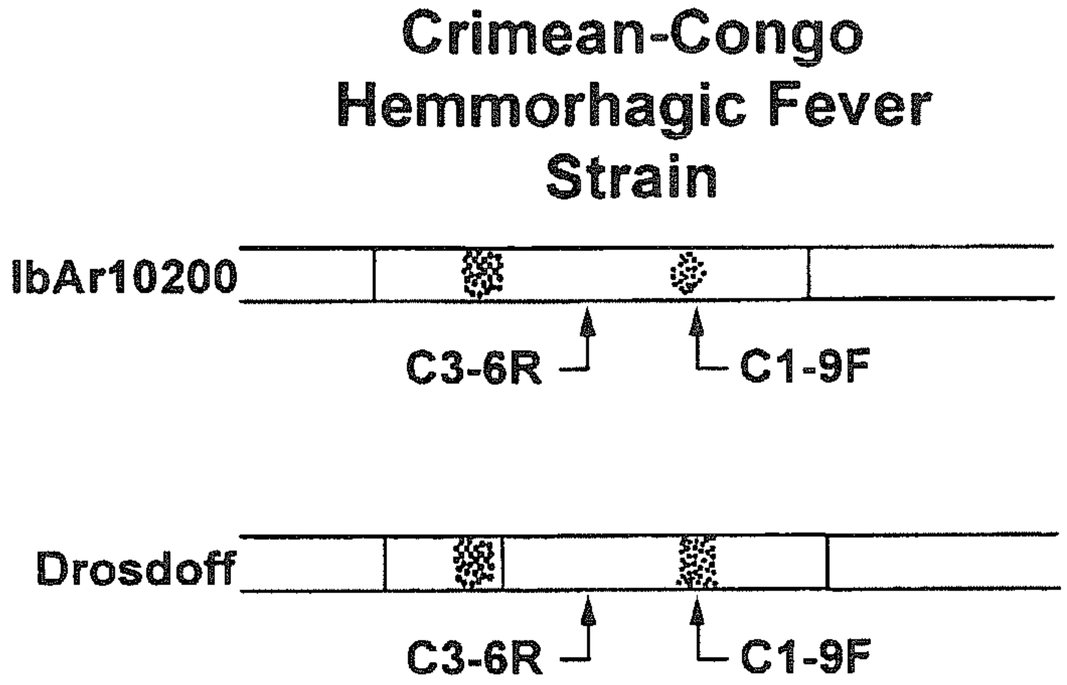


Fig. 9B

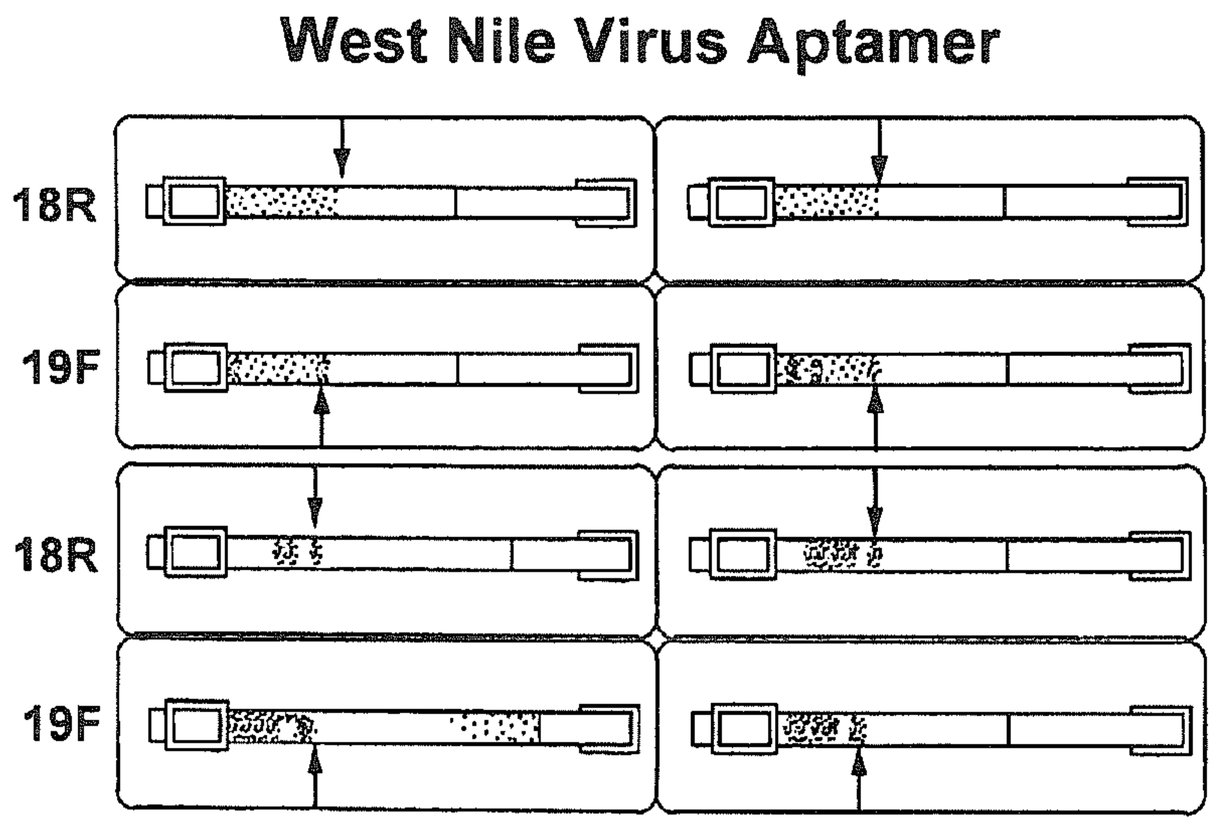


Fig. 9C

METHODS AND COMPOSITIONS OF DNA LIGANDS FOR ARTHROPOD-BORNE PATHOGEN DETECTION AND PROPHYLAXIS OR THERAPY

CLAIM OF PRIORITY TO PRIOR APPLICATION

This application claims the benefit of the filing date of Provisional U.S. Application Ser. No. 61/401,731, filed on Aug. 18, 2010, entitled "Methods and Compositions of DNA Ligands for Arthropod-borne Pathogen Detection and Prophylaxis or Therapy", and Non-Provisional U.S. patent application Ser. No. 13/199,082, filed Aug. 18, 2011, entitled "Methods and Compositions of DNA Ligands for Arthropod-borne Pathogen Detection and Prophylaxis or Therapy", the entire disclosures of which are hereby incorporated by reference into the present disclosure, to include the Sequence Listing previously submitted with the subject application(s).

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention pertains to the field of nucleic acid (especially DNA) ligand-based diagnostics and prophylaxis or passive "immunity" (i.e., binding and blocking infectious agents from infecting or progressing throughout the body). In particular, the application relates to single-stranded deoxyribonucleic acid ("DNA") and ribonucleic acid ("RNA") ligand sequences, whether individual or linked together to form longer multiple binding site "receptors," that specifically target and bind to arthropod-borne bacteria and viruses (arboviruses). Such arthropod-borne bacteria include the *Rickettsia* genus that can cause typhus or spotted fevers and deadly hemorrhagic fevers or other lethal diseases such as Crimean-Congo Hemorrhagic Fever ("CCHF") viruses, Chikungunya ("CHIK") viruses, Dengue viruses, and West Nile Viruses ("WNV") or parasites such as various species of *Leishmania*. The arthropod vectors can include mosquitoes, ticks, lice, mites, midges, fleas, flies and sandflies.

These individual or linked DNA ligand (aptamer) sequences represent valuable target analyte-responsive components of diagnostic devices or biosensors. A biosensor can be defined as any device that employs a biologically-derived molecule as the sensing component and transduces a target analyte binding event into a detectable physical signal (including, but not limited to, changes in light intensity, absorbance, emission, wavelength, color, electrical conduction, electrical resistance, or other electrical properties, etc). Once bonded with the target, these DNA ligand sequences can be used to qualitatively determine the presence of target analyte, as well as to quantify the target analyte amount, in a sample using a broad variety of assay types and diagnostic or sensor platforms including, but not limited to: affinity-based lateral flow test strips, enzyme-linked ("ELISA-like") microplate assays, membrane blotting, surface plasmon resonance ("SPR"), surface acoustic wave ("SAW") or surface transverse wave ("STW") sensors, magnetic bead ("MB")-based capture, plastic-adherent sandwich assays, electrochemiluminescence ("ECL"), radioisotopic, fluorescence intensity assays including quantum dot ("QD") or other fluorescent nanoparticle ("NP")-based assays, fluorescence lifetime, and fluorescence polarization ("FP") assays.

The invention includes general DNA ligand or aptamer-based methods of detection and quantification of these arthropod-borne diseases or related pathogens in homogenized or chemically (chaotrope or detergent)-extracted arthropods or animal or human body fluids such as whole blood, plasma,

serum, sputum or saliva, interstitial, synovial, or cerebrospinal fluid aspirates, mucus, and urine or solid biopsy samples.

In addition, these DNA ligand sequences are valuable in competitive displacement assays which are not solely dependent on affinity or avidity to produce sensitive detection. Such assays would include competitive displacement fluorescence or Förster resonance energy transfer ("FRET") assays or DNA ligand "beacon" FRET assays. Each of these types of assays and detection platforms has different applications in either central laboratories or as a component of portable detectors to identify infected arthropods (homogenates or extracts) or human or animal body fluids.

It has been established that aptamers can replace antibodies in lateral flow or chromatographic test strip assay formats and may enhance detection sensitivity by virtue of higher affinity versus comparable antibodies. Such test strips or dipsticks represent rapid, inexpensive and convenient visual detection formats. The user can add various human body fluids or arthropod homogenates or extracts (proteins removed from arthropod guts by low levels of detergents or chaotropes including guanidinium or metal salts) and obtain a positive or negative result by visualizing a red colloidal gold-aptamer conjugate line. Use of fluorescent nanoparticle ("FNP")- or quantum dot ("QD")-DNA aptamer conjugates on the test line of a lateral flow test strip in combination with a handheld UV penlight or common laser pointer to illuminate the fluorescent test and control lines appears to confer even greater sensitivity to the assay.

These individual or linked DNA ligand (concatamer-like aptamer) sequences represent valuable target analyte-responsive components of diagnostic devices or "biosensors." A biosensor is defined as any sensor device that employs a biologically-derived molecule as the sensing component and transduces a target analyte binding event into a detectable physical signal, including, but not limited to, changes in light intensity, absorbance, transmittance, refraction (Surface Plasmon Resonance or SPR), wavelength, color, agglutination of cells or particles, fluorescence intensity, fluorescence lifetime, fluorescence polarization or anisotropy, fluorescence correlation spectroscopy ("FCS"), fluorescence or Förster resonance energy transfer (FRET; nonradiative dipole-dipole coupling of fluorophores or fluorophores and quenchers), upconverting phosphor (anti-Stokes shifts), two-photon interaction phenomena, Raman spectroscopy or surface-enhanced Raman spectroscopy ("SERS"), electrical conduction, electrical resistance or other electrical properties, mass, photon or radioactive particle emissions, etc.

Once bonded with the target, these DNA ligand sequences can be used to qualitatively determine the presence of analyte, as well as to quantify or semi-quantify the target analyte amount in a sample using a broad variety of assay types and diagnostic or sensor platforms including, but not limited to, affinity-based lateral flow test strips, membrane blotting, surface plasmon resonance ("SPR"), surface acoustic waveguides ("SAW") or surface transverse waveguides ("STW") devices, magnetic bead ("MB")-based capture, plastic-adherent sandwich assays ("PASA"), chemiluminescence ("CL"), electrochemiluminescence ("ECL"), radioisotopic, fluorescence intensity, including quantum dot ("QD") or other fluorescent nanoparticle ("FNP") of dye-based, fluorescence lifetime, and fluorescence polarization ("FP") assays, or enzyme-linked ("ELISA-like") microplate assays.

Finally, since envelope- or capsid-protruding spike proteins on viral surfaces control binding to and invasion of host cells, the DNA ligands may have prophylactic or therapeutic value by simply binding or coating the viral spike proteins to prevent attachment to host cell surfaces and inhibiting virus

entry into host cells. The prophylactic effect has been demonstrated for H5N1 influenza virus with similar DNA ligand or aptamer sequences that coated the H5N1 viruses and prevented or severely inhibited invasion of host cells and slowed or stopped subsequent viral replication.

2. Background Information

The DNA ligand sequences listed herein were derived by iterative cycles of affinity-based selection of DNA ligands from a randomized library using rickettsial or leishmanial surface molecules (cold 1.5M $MgCl_2$-extracted outer membrane proteins; OMPs), recombinant surface proteins or synthetic peptide epitopes derived from the known amino acid sequences of viral envelope protein spikes or other surface epitopes as defined in Table 1. After affinity-based selection, the DNA ligands were subjected to polymerase chain reaction ("PCR") amplification followed by cloning and traditional Sanger dideoxynucleotide DNA sequencing. The utility of many of the sequences in ELISA-like plate assays as well as fluorescence (intensity) assays have been used and verified as illustrated by Tables 2-7 and FIGS. **2**-**7** and FIG. **9**.

Some of the sequences function more effectively in affinity-based (ELISA-like, lateral flow strips, or fluorescence intensity) assays, while other DNA ligand sequences against the same pathogen targets have functioned better in competitive FRET assays). Therefore, all of the listed sequences have potential utility in some assay format for use in one or more tests or types of sensors for arthropod-borne pathogens and their therapy or prevention.

Arthropod-borne pathogens can present serious threats to human health in the form of alphaviruses or flaviviruses (arboviruses) that can cause encephalitis or hemorrhagic fevers or shock syndromes and death. Similarly, untreated rickettsial infections can lead to serious cases of spotted fevers or typhus with significant mortality. Finally, visceral and non-visceral leishmaniasis are serious conditions which are difficult to treat and can be fatal. All of these diseases are transferred to man by arthropod vectors (flying or other insects including mosquitoes, fleas, mites, midges, ticks, lice, flies and sandflies).

Rapid, accurate, and ultrasensitive detection of arthropod-borne diseases aids physicians by supplying key diagnostic information in the early phases of infection. This in turn allows administration of the proper antibiotic or anti-viral agent to treat these potentially deadly diseases before they become life-threatening. Current methods of detection such as lateral flow immunochromatographic test strips, although rapid, are not very sensitive and miss early stage disease detection or rely on detection of antibodies against the disease agent which may take weeks to emerge in the patient's serum. The same is true for many slower and more tedious ELISA tests which are somewhat more sensitive than lateral flow test strips, but often rely on detection of antibodies slowly made by the patient against the infectious pathogen over a period of weeks to months. In addition, there are no truly effective therapies for some of the arboviruses.

The DNA ligands disclosed herein can potentially and directly detect many arthropod-borne pathogenic microbes with greater sensitivity and speed than conventional antibodies. These same DNA ligands or aptamers may also have value as high affinity and highly specific binding agents against arboviruses, *rickettsia* and parasites to block or slow disease progression.

SUMMARY OF THE INVENTION

The present invention provides specific DNA sequence information for nucleic acid ligands selected and amplified from randomized pools to bind arthropod-borne pathogenic *rickettsia*, arboviruses and parasites in a variety of assay formats and sensor or diagnostic platforms. In addition, the DNA ligands may bind and slow or block infection and inhibit disease progression due to these pathogens, thereby functioning as prophylactics or therapeutics in vivo.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1**A illustrates the general structure of an IgG antibody showing the linkage of hypervariable (HV) amino acid regions used for actual binding to target epitopes on complex antigens.

FIG. **1**B illustrates nucleotide segments designed into the cDNA template.

FIG. **2** illustrates fluorescence spectra from titration of a plastic-adherent DNA ligand-magnetic bead and fluorescent nanoparticle assay.

FIG. **3** illustrates the results of screening a matrix of 5-biotinylated capture aptamer-magnetic beads and TYE 665 dye-5'-labeled reporter aptamers from the Crimean-Congo viral aptamer pool represented by SEQ ID NOs. 663-756.

FIG. **4** illustrates titration of CCHF viral peptides conjugated with 1% glutaraldehyde to bovine serum albumin.

FIG. **5** illustrates the specificity of the combination 22 CCHF plastic-adherent assay which detects gamma-irradiated CCHF viruses.

FIGS. **6**A-**6**D illustrate similar plastic-adherent (PASA) DNA ligand-magnetic bead and DNA ligand-fluorescent nanoparticle sandwich assay fluorescence results.

FIGS. **7**A-**7**C illustrate the plastic-adherent (PASA) sandwich assay results for three different combinations of capture and reporter DNA ligands for detection of *Rickettsia typhi.*

FIG. **8** illustrates the probe scheme used for the test and control lines on successful lateral flow nitrocellulose aptamer chromatographic test strips.

FIGS. **9**A-**9**C show several successful attempts to detect either gamma-irradiated viruses or purified BSA-glutaraldehyde-viral spike peptide conjugates on lateral flow strips.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

There is no single preferred embodiment for use of the DNA ligand sequences in assay or biosensor formats identified herein. Rather, as is the case with monoclonal antibodies, the sequences are useful to varying extents in a variety of assay formats and sensors or diagnostic devices chosen from the following non-comprehensive and non-exclusive list: lateral flow or chromatographic test strips or "dipsticks," ELISA-like enzyme-linked microplate assays, magnetic bead-based capture assays, ECL or other chemiluminescence assays, radioisotopic assays and a variety of fluorescence assays including, but not limited to, fluorescence intensity or spectrofluorometry, lifetime, fluorescence polarization ("FP") and fluorescence resonance energy transfer ("FRET") assays (both end-labeled beacons and competitive FRET), SAW and STW-based detection, SPR.

Referring to the figures, FIG. **1**A illustrates the general structure of an IgG antibody showing the linkage of hypervariable ("HV") amino acid regions used for actual binding to target epitopes on complex antigens. Linear linkage of HV binding sites adds affinity, avidity and specificity to the antibody binding to complex targets. FIG. **1**A is a Porter stick model of an antibody revealing the multiple hypervariable antigen combining or binding sites on both the heavy and light chains.

FIG. **1**B illustrates the concept of linking aptamers or their binding sites in a linear fashion (although 2-D and 3-D dendrimer-like linkages are also possible) to mimic the linkage of multiple HV regions in antigen combining sites of antibody chains to enhance affinity, epitopes. The linked DNA ligands or aptamers are somewhat like concatamers, but can vary in the composition of DNA molecules that are linked together (i.e., can be non-repetitive versus repetitive concatamers). DNA ligands or aptamers or their shorter (5-10 base) binding sites can be linked during chemical or biochemical (enzymatic) synthesis to enhance aptamer binding affinity, avidity or specificity for improved assay sensitivity and selectivity.

As nature, immunology, and FIG. **1** suggest, the linkage of binding sites is beneficial in terms of enhancing receptor affinity, avidity (tensile binding strength), and selectivity versus complex targets with two or more distinct epitopes. This linkage can be sequential and linear (one-dimensional as in antibody heavy and light chain linkage of HV regions, FIG. **1**A) or could be expanded into two or three dimensions much like DNA dendrimers or other more complex structures known to those skilled in the art. The linked DNA ligands or aptamers are somewhat like concatamers, but can vary in the composition of DNA molecules or subunits that are linked together (i.e., can be non-repetitive versus repetitive concatamers).

Linear linkage by chemical synthesis is quite facile, if one already knows the aptamer DNA sequences or shorter (approximately 5-10 base) binding site sequences to be linked. One can simply design one long sequence to incorporate the desired aptamers or binding sites with repetitive poly-adenine (A), poly-cytosine (C), poly-guanine (G), poly-thymine (T), poly-uridine (U), or other intervening sequences that are unlikely to bind the target epitopes. The length of the composite aptamer construct will be limited by current chemical synthesis technology to about 200 bases. However, cellular biosynthesis or enzymatic synthesis by polymerase chain reaction or asymmetric PCR (producing predominately single-stranded ss-DNA from a template) would not be so limited and should produce aptamer constructs up to 2,000 bases before the Taq polymerase or other thermostable DNA polymerase falls off the template DNA. The 2 kilobase Taq polymerase limit is the basis for the well-known Random Amplification of Polymorphic DNA ("RAPD") method of DNA or genetic "fingerprint" analyses in which primers greater than 2 kilobases apart fail to produce a PCR product or amplicon, because Taq becomes disengaged from the template DNA before traveling 2,000 bases. In this way, lengthy aptamer constructs of less than 2 kilobases could be made from complementary DNA templates that would enable binding of different epitopes that are distal on the surface of relatively large objects such as viruses and whole bacteria, *rickettsia*, or eukaryotic parasites and other cells. Again, poly-A, C, G, T, or U or other linker nucleotide segments (similar to the concept of genetic "introns") could be designed into the cDNA template to produce the resultant nascent strand to ligate aptamers or aptamer binding sites together into one contiguous linear chain with intervening linkers as shown in FIG. **1**B.

For 2-D or 3-D linked aptamer structures a variety of linker chemistries are available, but the preferred embodiment is probably addition of a UniLink™ primary amine group somewhere in the mid-section of a larger multi-aptamer construct followed by covalent linkage and branching of two or more such multi-aptamer constructs by means of bifunctional linkers such as low levels (≤1%) of glutaraldehyde, carbodiimides, sulfo-EGS, sulfo-SMCC or other such bifunctional linkers familiar to those skilled in conjugate chemistry. This strategy would result in larger flower-like or dendrimer-like 2-D or 3-D structures consisting of two or more lengthy multi-aptamer structures.

FIG. **2** shows fluorescence spectra from titration of a plastic-adherent DNA ligand-magnetic bead and fluorescent nanoparticle assay for detection of gamma-irradiated (inactivated) Crimean-Congo Hemorrhagic Fever (CCHF) viruses. The spectra or curves each represent fluorescence intensity results as a function of wavelength elicited by interaction with various virus dilutions after collection on aptamer or DNA ligand-biotin-streptavidin-magnetic microbeads of 2.8 microns in diameter (Dynal brand from Invitrogen Corp.), exposure to red-emitting fluorescent nanoparticles (FNPs) or Fluospheres (Invitrogen, Inc.) and two washes in 1× binding buffer (1× BB; 0.5M NaCl, 10 mM Tris and 1 mM $MgCl_2$ at pH 7.6). Excitation was at 660 nm and the photomultiplier tube of the spectrofluorometer was set at 900 V. The spectra were obtained using DNA ligands for capture on magnetic beads and red fluorophore-labeled reporter DNA ligands selected from the pool of aptamers represented by SEQ ID NOs. 1-168. In particular, aptamer C1-1/7F (SEQ ID NO. 3) was used for gamma-irradiated viral capture on magnetic beads and 5'-amino aptamer C1-9F (SEQ ID NO. 15) was conjugated to red FNPs by means of a carbodiimide bond, purified and used as the reporter reagent. The clear detection of the 1;6400 dilution above the background curve suggests detection of as few as 150 CCHF virus particles.

FIG. **3** shows the results of screening another matrix of 5-biotinylated capture aptamer-magnetic beads and TYE 665 dye-5'-labeled reporter aptamers from the Crimean-Congo (CCHF) viral aptamer pool represented by SEQ ID NOs. 663-756. The top 5 capture and reporter sandwich assay aptamer combinations were evaluated in all 25 (5 capture×5 reporter) possible combinations using a handheld Picofluor™ fluorometer set to its highest sensitivity (STD VAL=999.0). After washing in buffer on a permanent magnetic collection rack and reading this plastic-adherent assay in the polystyrene cuvettes, combination 22 (Gn6-25R; SEQ ID NO. 98) capture aptamer-biotin on streptavidin magnetic beads combined with E7A-18F; SEQ ID NO. 689) 5'-TYE 665-labeled reporter aptamer) was shown to be the strongest or most intense possible assay combination for further development.

FIG. **4** illustrates titration of CCHF viral peptides conjugated with 1% glutaraldehyde to bovine serum albumin (BSA) and purified by size-exclusion chromatography in the void volume of a Sephadex G25 column to emulate CCHF virus particles in pure phosphate buffered saline (PBS), a 50:50 PBS to human serum mix or 100% human serum matrix to test detection with the CCHF combination 22 assay using the Picofluor™ handheld fluorometer at its highest sensitivity setting. Clearly CCHF combination 22 detected the viral stimulant quite well in buffer and continued to detect the simulant even in pure human serum, albeit with less intense fluorescence output.

FIG. **5** shows the specificity of the combination 22 CCHF plastic-adherent assay which detects gamma-irradiated CCHF viruses of a comparable concentration much more intensely than unrelated Adenovirus, MS-2 bacteriophage, or Reovirus Type 3 Abney strain viruses.

FIG. **6** illustrates similar plastic-adherent (PASA) DNA ligand-magnetic bead and DNA ligand-fluorescent nanoparticle sandwich assay fluorescence results for the detection of *Rickettsia conorii* to a level of approximately 3 μL or 75 cells in some cases. Various DNA ligand sequences are used in capture and reporter roles in the four different experiments from the pool of SEQ ID NOs. 549-662.

FIG. **7** illustrates the plastic-adherent (PASA) sandwich assay results for three different combinations of capture and reporter DNA ligands for detection of *Rickettsia typhi*. Serial dilutions of the *rickettsia* were evaluated using a spectrofluorometer and red-emitting fluorescent nanoparticles. Again, these sandwich assay aptamer combinations were drawn from the pool of SEQ ID NOs. 549-662.

FIG. **8** illustrates the aptamer-5'-biotin-streptavidin-gold nanoparticle (GNP) or fluorescent nanoparticle (FNP) and streptavidin-biotin-5'-primer probe (to grab the complementary 18 base constant primer regions on the DNA ligand ends) scheme used for the test and control lines on successful lateral flow nitrocellulose aptamer chromatographic test strips displayed in FIG. **9** and described in the specifications or main text.

FIG. **9** documents several successful attempts to detect either gamma-irradiated viruses or purified BSA-glutaraldehyde-viral spike peptide conjugates on lateral flow strips using the method shown in FIG. **8**. In particular, panel A shows a strong visible red spot indicating detection of the Chikungunya envelope peptide (ChE) with aptamer ChE 20R (SEQ ID NO. 204) and much fainter detection at the spot where ChE 17R aptamer was laid down and immobilized. Panel B shows similar positive red GNP detection spots for the C1-9F aptamer (SEQ ID NO. 15) detecting two different strains of actual gamma-irradiated CCHF virus, while the CCHF or C3-6R aptamer did not detect the viruses despite its strong performances and evidence of very high affinity in ELISA-like microplate assays and SPR analyses (Tables 2 and 3). Panel C illustrates two successful tests for West Nile Virus (WNV) envelope peptide-BSA conjugates using the WNV-18R and 19R aptamers which correspond to SEQ ID NOs. 306 and 307, respectively. Arrows in each of the panels point to the locations where capture dots or lines of DNA ligands were laid down.

TABLE 1

Targets for DNA Ligand Selection and Development

Chikungunya (ChE) E1a Virus Surface Peptide
(one letter amino acid-coded sequence)
GDIQSRTPESKDVYANTQLVLQRPAVGTVHVPYSQAPSGFKYWLKERGAS

Crimean-Congo Hemmorhagic Fever (CCHF) Virus Surface Peptide Targets (one-letter amino acid coded sequences)
CCHF Peptide 1:
RRLL

CCHF Peptide 2:
RKPL

CCHF Peptide 3:
GQGKTIEAYRAREG

CCHF Peptide 4:
GQGKTIEAYRAREGNAST GQGKTIEAYRAREG

CCHF Altamura Gn 611:
TQEGRGHVKLSRGSE

CCHF 11E7-a:
GLKFASLTCTGCYACSSGISCKVRIHVDEPDE

CCHF 11E7-b:
VAASSSLMARKLEFGTDSTFKAFSAMPKTSLCFYIVEREY

CCHF 11E7-c:
EDTQKCVNTKLEQPQSILIEHKGTIIGK

Dengue Viruses
Recombinant Envelope Proteins Serotypes 1-4 from Virostat Corp., Portland, Me., Cat. Nos. 8812-8815.

Leishmania Promastigotes
L. donovani, L. major WR2885 and other species of live cell surface cold (4° C.) overnight 1.5M $MgCl_2$-protein extracts obtained from the U.S. Army, Walter Reed Army Institute of Research (WRAIR).

Rickettsia
R. belli, R. conorii, R. parkeri, R. rickettsii, and *R. typhi* frozen cell protein extracts obtained from the U.S Navy Medical Research Command at WRAIR.

Tick-Borne Encephalitis Viruses (TBEV)
Recombinant TBEV CE/gE from Feldan Bio Corp. (Boston, Mass. and Quebec, Canada) Cat. No. FB03-80-149.

West Nile Virus (WNV)
Recombinant Envelope Protein from GenWay Biotech Corp. San Diego, Calif., Cat. No. 10-511-248224.

EXAMPLE 1

ELISA-Like and SPR Affinity-Based Screening of Arthropod-Borne Pathogen DNA Ligands

Table 2 illustrates diversity of affinities for several different CCHF envelope peptide epitopes using two methods (0.1M bicarbonate buffer at pH 8.5 or N-oxy-succinimide-coated microwells) to immobilize the peptides and then carry out a traditional ELISA-like assay with 100 μL of 5'biotinylated DNA ligands for one hour at room temperature (RT, followed by a wash step, addition of 100 μL of 1:2,000 dilution of streptavidin-peroxidase (1 mg/mL stock) for 30 minutes at RT, three more wash steps and finally treatment with one-step ABTS substrate for 10 minutes at RT and reading of absorbance at 405 nm on a microplate reader. Tables 2 and 5-7 show ELISA-like rankings of the various top 3 to 10 DNA ligands by SEQ ID NOs for each of the general arthropod disease categories.

The highest ranking or highest affinity DNA ligands register the highest absorbance at 405 nm values and can be used in other types of affinity-based assays besides the ELISA-formatted assays. The highest affinity or highest ranking CCHF DNA ligands such as CCHF1-9F and CCHF3-6R also yielded very high affinity constants of greater 10^8 to 4.23×10^{11} by surface plasmon resonance (SPR) using a Biacore X-100 sensor as documented in Tables 3 and 4. The same or similar ELISA-like methods were used to screen and rank DNA ligand affinities against cognate arboviral, rickettsial and *Leishmania* targets as shown in Tables 5-7. Table 8 chronicles all of the actual candidate DNA ligand nucleotide sequences and corresponding SEQ ID NOs for all of the arthropod-borne pathogen-binding DNA ligands.

TABLE 2

ELISA-Like Rankings for Absorbance of Highest Affinity CCHF DNA Ligands

$NaHCO_3$-Immobilized				NOS-Immobilized			
Rank	Abs 405	SEQ ID NO.	Aptamer	Rank	Abs 405	SEQ ID NO.	Aptamer
1	2.669	31	CCHF3-4F	1	2.219	15	CCHF1-9F
2	2.478	36	CCHF3-6R	2	2.141	36	CCHF3-6R
3	2.473	32	CCHF3-4R	3	2.048	4	CCHF1-1/7R
4	2.243	15	CCHF1-9F	4	1.987	32	CCHF3-4F
5	1.657	28	CCHF2-10R	5	1.987	16	CCHF1-9R

TABLE 2-continued

ELISA-Like Rankings for Absorbance of Highest Affinity CCHF DNA Ligands

$NaHCO_3$-Immobilized				NOS-Immobilized			
Rank	Abs 405	SEQ ID NO.	Aptamer	Rank	Abs 405	SEQ ID NO.	Aptamer
6	1.645	25	CCHF2-8F	6	1.987	2	CCHF1-1R
7	1.618	18	CCHF1-10R	7	1.949	14	CCHF1-6R
8	1.561	16	CCHF1-9R	8	1.903	3	CCHF1-1/7F
9	1.505	38	CCHF3-7R	9	1.853	7	CCHF1-3F
10	1.483	40	CCHF3-8R	10	1.848	25	CCHF2-8F

TABLE 3

Summary of CCHF DNA Ligand SPR Data

CCHF DNA Ligand	vs. Peptide	K_a	K_d (picoM)
1-9F	Peptide 1	1.23×10^8	8.13
1-9F	Peptide 3	3.06×10^6	327
1-9F	Peptide 4	3.2×10^{10}	0.31
3-4R	Peptide 3	8.85×10^7	11.3
3-4R	Peptide 4	3.1×10^6	322
3-6R	Peptide 3	4.23×10^{11}	0.24
3-6R	Peptide 4	2.19×10^4	45,700

TABLE 4

Summary of Aptamer K_A Values vs. 11E7 CCHF Envelope Peptides by SPR

DNA Ligands or Aptamers	CCHF Peptides 11E7A	11E7B	11E7C
E7A-11R	4.62×10^8	7.34×10^7	3.11×10^9
Drosdov 4-7/10R	5.39×10^9	1.27×10^7	Not done
Drosdov 17R	2.09×10^9	6.08×10^8	Not done
E7B-14R	5.2×10^8	9.37×10^7	3.72×10^7
Gn6-25R	5.5×10^8	2.07×10^8	1.48×10^{10}
E7A-18F	1.39×10^7	3.48×10^9	1.92×10^7

TABLE 5

ELISA-Like Rankings of Various Arthropod-borne Virus DNA Ligands

Sequence	SEQ ID NO.	A 405 nm
TBEV-2 R	760	2.601
TBEV-8 R	772	2.430
TBEV-2 F	759	2.314
TBEV-1 R	758	2.150
TBEV-4 R	764	2.124
TBEV-6 R	768	2.124
TBEV-6 F	767	2.067
TBEV-5 F	765	2.057
TBEV-7 F	769	2.021
TBEV-7 R	770	1.972

TABLE 5-continued

ELISA-Like Rankings of Various Arthropod-borne Virus DNA Ligands

Sequence	SEQ ID NO.	A 405 nm
TBEV-10F	773	1.951
TBEV-1 F	757	1.935
TBEV-5 R	766	1.925
TBEV-3 R	762	1.908
TBEV-4 F	763	1.881
TBEV-8 F	771	1.847
TBEV-10R	774	1.823
TBEV-3 F	761	1.797
ChE - 16F	195	2.594
ChE - 20R	204	2.562
ChE - 17R	198	2.510
ChE - 19F	201	2.474
ChE - 16R	196	2.464
ChE - 19R	202	2.459
ChE - 17F	197	2.431
ChE - 18F	199	2.388
ChE - 20F	203	2.364
ChE - 18R	200	2.246
WNV 19F	307	2.727
WNV 18R	306	2.654
WNV 20F	309	2.538
WNV 20R	310	2.467
WNV 16F	303	2.450
WNV 16R	304	2.255
WNV 19R	308	2.177
WNV 18F	305	1.997

TABLE 6

ELISA-Like Rankings of Leishmania parasite DNA Ligands

Sequence	SEQ ID NO.	A 405 nm
Lm 49, 50R	548	2.501
Lm 25R	516	2.406
Lm 1147R	494	2.238
Lm 610F	487	2.212
Lm 16F	501	2.166
Lm 19R	508	2.141

TABLE 6-continued

ELISA-Like Rankings of Leishmania parasite DNA Ligands

Sequence	SEQ ID NO.	A 405 nm
Lm 17R	504	2.091
Lm 3240F	525	2.045
Lm 38F	535	1.979
Lm 13R	496	1.935
Lm 22R		1.916
Lm 31R		1.899
Lm 2643F		1.854
Lm 241R		1.850
Lm 241F		1.849
Lm 46F		1.845
Lm 34R		1.838
Lm 42R		1.835
Lm 4950F		1.806
Lm 7F		1.791
Lm 25F		1.787
Lm 36R		1.709
Lm 15R		1.698
Lm 13F		1.684
Lm 39F		1.679
Lm 21F		1.659
Lm 38R		1.653
Lm 23F		1.644
Lm 46R		1.634
Lm 2643R		1.626
Lm 27F		1.598
Lm 42F		1.596
Lm 22F		1.576
Lm 31F		1.569
Lm 5R		1.537
Lm 7R		1.516
Lm 29R		1.516
Lm 34F		1.516
Lm 9R		1.504
Lm 610R		1.466
Lm 18R		1.446
Lm 19F		1.442
Lm 23R		1.442

TABLE 6-continued

ELISA-Like Rankings of Leishmania parasite DNA Ligands

Sequence	SEQ ID NO.	A 405 nm
Lm 16R		1.437
Lm 45R		1.435
Lm 35R		1.433
Lm 32/40R		1.411
Lm 17F		1.410
Lm 44F		1.391
Lm 45F		1.380
Lm 1F		1.378
Lm 18F		1.367
Lm 37F		1.366
Lm 15F		1.365
Lm 35F		1.305
Lm 1R		1.261
Lm 21R		1.261
Lm 5F		1.252
Lm 39R		1.224
Lm 9F		1.219
Lm 4R		1.217
Lm 1147F		1.216
Lm 27R		1.207
Lm 14F		1.182
Lm 36F		1.181
Lm 3R		1.179
Lm 44R		1.157
Lm 29F		1.125
Lm 4F		1.095
Lm 3F		1.092
Lm 37R		1.048
Lm 14R		0.984

TABLE 7

ELISA-Like Rankings of *Rickettisia* DNA Ligands

Type	Species	Aptamer Clone	SEQ ID NO.	Avg. Absorbance at 405 nm
Whole Cell	*R. parkeri*	Rp-7R	556	1.33
		Rp-14R	568	1.34
		Rp-20F	577	1.37

TABLE 7-continued

ELISA-Like Rankings of *Rickettisia* DNA Ligands

Type	Species	Aptamer Clone	SEQ ID NO.	Avg. Absorbance at 405 nm
	R. rickettsii	Rr-8/14/22R	584	1.21
		Rr-17F	599	1.18
		Rr-23R	610	1.22
	R. typhi	Rt-3R	620	1.48
		Rt-5/16F	623	1.53
		Rt-18R	648	1.45
OMPs	*R. belli*	R5-23F	317	2.93
		R5-39F	347	1.95
		R5-21bR	316	1.89
	R. conorii	R4-1R	352	2.12
		R4-14R	362	2.05
		R4-1F	351	1.99
	R. parkeri	R2-14F	393	2.08
		R2-17R	400	2.05
		R2-5F	379	1.95
	R. rickettsii	R3-39F	413	2.12
		R3-39R	414	2.05
		R3-40R	416	1.99
	R. typhi	R1-21R	426	2.88
		R1-30R	444	2.85
		R1-27bF	437	2.62

EXAMPLE 2

Ultrasensitive Detection of CCHF Virus and *Rickettsia* by Plastic-Adherent Sandwich Assay

The DNA ligand sequences have repeatedly been reduced to practice and used to detect low levels of CCHF viral envelope epitopes in neat buffer or animal sera as shown in FIG. **2**. In this assay, two different CCHF sequences (CCHF 1-1/7F and 1-9F) from the SEQ ID NO. 3 and SEQ ID NO. 15 were 5'-biotin or 5'-amine modified upon synthesis and attached to either 10^6 streptavidin-M280 (2.8 micron diameter) Dynal (Invitrogen, Inc.) MBs for virus capture or custom-made red-emitting carboxyl-coated FNPs (Invitrogen, Inc.) for reporting per test. The lower limit of detection (LLOD or 1:6400 dilution) for this assay was approximately 150 viral particles according to plaque assay data obtained from the U.S. Army at USAMRIID, Ft. Detrick, Md. Excitation was at 600 nm and the photomultiplier tube ("PMT") was set at 900V.

Similarly sensitive plastic-adherent sandwich fluorescence assay results for two species of *rickettsia* cells with LLOD or about 75 cells are shown in FIGS. **5** and **6**. These assays also sandwich rickettsial cells between magnetic bead-DNA ligand capture elements and DNA ligand-quantum dot or FNP-labeled reporter aptamers drawn from the SEQ ID NOs given in Table 8.

EXAMPLE 3

Lateral Flow (LF) Aptamer Sandwich Assays for Arthropod-Borne Bacteria or Viruses Using Colloidal Gold or Fluorescent Nanoparticles

Aptamer-based LF test strips are assembled much like traditional immunochromatographic strips by combining a Whatman GB002 sample pad, a Whatman Standard 17 conjugate pad, Millipore High Flow 240 analytical membrane (for slower migration and greatest sensitivity) and a Whatman 470 wicking or absorbent applied to a pressure sensitive sticky laminate backing. The sample pad is soaked in 0.05M Tris-HCl (pH 8.03) with 0.15 mM NaCl and 0.25% Triton X-100 for 30 minutes followed by air drying of the sample pad strip at 37° C. for several hours until completely dry. The components are assembled with the sample pad overlapping the conjugate pad and both the conjugate pad and wicking pads overlapping onto the nitrocellulose analytical membrane at each end of the analytical membrane as shown in FIG. **8**. Thereafter, 4 mm wide strips are cut with a sharp paper cutter and laid into plastic cassettes for protection.

The streptavidin-colloidal gold for use in conjugates was obtained from DCN at 10 O.D. units per mL and 100 μL of this reagent was added to 100 μL of each 5'-biotinylated aptamer (1.3 to 1.5 mg/mL). Similarly, 100 μL of each 5'-biotin aptamer were added to 100 μL of simple streptavidin at (0.5 mL, Sigma Chemical Co.) and reagents were gently mixed at RT (20-25° C.) for 30 minutes. Any unbound aptamers were removed by use of sterile 30 kD molecular weight cut off spin columns which were centrifuged at 5,000×g for 10 minutes. The retentate was resuspended or rehydrated in 100 μL of sterile 1× BB and used in LF test strip experiments. The capture lines or "dots" (droplets) were laid down as 1 μL droplets a few millimeters from the conjugate pad on Millipore High Flow (HF) 240 nitrocellulose analytical membranes, sometimes in series, and air dried prior to baking in a UV oven for 15 minutes. The conjugate pads were loaded with 10-15 μL of colloidal gold-streptavidin-biotin-aptamer conjugates and target analytes were added in 100 μL of 1× BB at the indicated amounts in each figure. All colloidal gold LF tests were conducted and evaluated after 5 minutes of run time to enable the HF 240 membranes time to fully develop. FIG. **9** specifically illustrates examples of successful lateral flow DNA ligand (aptamer) tests with the Chikungunya virus aptamer ChE 20R (SEQ ID NO. 204), Crimean-Congo (CCHF) virus aptamer C1-9F (SEQ ID NO. 15) and the West Nile virus (WNV) aptamers 18R and 19F (SEQ ID NOs. 306 and 307 respectively). Interestingly, some other aptamers used for the experiments represented in FIG. **9** such as ChE 17R and CCHF C3-6R which performed well in ELISA-like plate assays or SPR analysis for affinity assessment (Tables 2, 3, and 5), did not perform well in the lateral flow format, thereby further underscoring a basic tenet of this patent application that not all high-affinity DNA ligands from a given group will perform well in all assay formats.

DNA aptamer-quantum dot and aptamer-fluorescent nanoparticle (FluoSpheres™; "FS" from Invitrogen) conjugates were initially adhering rather tightly to glass fiber conjugate pads and not releasing well or not migrating as far as unconjugated particles, but these obstacles were overcome by switching to a larger porosity HighFlow ("HF") 75 analytical membrane and 40 nm streptavidin-FS to obtain the successful proof-of-concept data shown in FIG. **9**C.

Although the invention and DNA ligand sequences listed in Table 8 have been described with reference to specific embodiments, this description is not meant to be construed in a limited sense. Various modifications of the disclosed embodiments, as well as alternative embodiments of the inventions will become apparent to persons skilled in the art upon reference to the description of the invention. It is, therefore, contemplated that the appended claims will cover such modifications that fall within the scope of the invention.

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tggctcccgt at 72

<210> SEQ ID NO 9
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 9

atacgggagc caacaccacc tagtgttgaa tctgaccaca agctaagtct tcggagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 10
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 10

atccgtcaca cctgctctcc gaagacttag cttgtggtca gattcaacac taggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 11
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 11

atacgggagc caacaccaag cacggaaaga gggtcgcctg atagcccgcc aatcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 12
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence

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<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 12

atccgtcaca cctgctctga ttggcgggct atcaggcgac cctctttccg tgcttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 13
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 13

atacgggagc caacaccaag aaatgccaac acaacgacac cggtagtgct gcccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 14
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 14

atccgtcaca cctgctctgg gcagcactac cggtgtcgtt gtgttggcat ttcttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 15
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 15

atacgggagc caacaccatg gtgacggacc ttgagagcaa gaccgctacg attcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 16
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 16

atccgtcaca cctgctctga atcgtagcgg tcttgctctc aaggtccgtc accatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 17
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 17

atacgggagc caacaccaga agaacactgc ctagaataag tggtgcaggg ccgtagagca 60

ggtgtgacgg at 72

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<210> SEQ ID NO 18
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 18

atccgtcaca cctgctctac ggccctgcac cacttattct aggcagtgtt cttctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 19
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 19

atacgggagc caacaccatt aggtggtaga ctgtaggtta cagatagccg gggagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 20
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 20

atccgtcaca cctgctctcc ccggctatct gtaacctaca gtctaccacc taatggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 21
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 21

atacgggagc caacaccatc tggcgccgac cctgtggatt gcagtcgcgg ttacagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 22
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 22

atccgtcaca cctgctctgt aaccgcgact gcaatccaca gggtcggcgc cagatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 23
<211> LENGTH: 69
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 23

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atacgggagc caacaccata gtgttgggcc aatacggtaa cgtgtccttg gagagcaggt 60

gtgacggat 69

<210> SEQ ID NO 24
<211> LENGTH: 69
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 24

atccgtcaca cctgctctcc aaggacacgt taccgtattg gcccaacact atggtgttgg 60

ctcccgtat 69

<210> SEQ ID NO 25
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 25

atacgggagc caacaccaca gacaccgaat gagcaacaca acaacgggac ccgtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 26
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 26

atccgtcaca cctgctctac gggtcccgtt gttgtgttgc tcattcggtg tctgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 27
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 27

atacgggagc caacaccagg tatccgaccg gacacggcac tacgacctct ttgcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 28
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 28

atccgtcaca cctgctctgc aaagaggtcg tagtgccgtg tccggtcgga tacctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 29
<211> LENGTH: 72
<212> TYPE: DNA

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<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 29

atacgggagc caacaccagg gttggtgtaa agtggccagc cctttacgct aagtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 30
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 30

atccgtcaca cctgctctac ttagcgtaaa gggctggcca ctttacacca accctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 31
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 31

atacgggagc caacaccaca gctgacaata gaaggatatc ctgggtaccg atgcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 32
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 32

atccgtcaca cctgctctgc atcggtaccc aggatatcct tctattgtca gctgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 33
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 33

atacgggagc caacaccact gtgtataacc ctaacgctct atgttcgtta tgcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 34
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 34

atccgtcaca cctgctcttg cataacgaac atagagcgtt agggttatac acagtggtgt 60

tggctcccgt at 72

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<210> SEQ ID NO 35
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 35

atacgggagc caacaccagc ccccgcctgg ttcccgcagg ccgctcgcgt cccgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 36
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 36

atccgtcaca cctgctctcg ggacgcgagc ggcctgcggg aaccaggcgg gggctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 37
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 37

atacgggagc caacaccacg ggcgtcacta gctcagaccg tcccccgttg gtatagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 38
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 38

atccgtcaca cctgctctat accaacgggg gacggtctga gctagtgacg cccgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 39
<211> LENGTH: 69
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 39

atacgggagc caacaccata gtgttgggcc aatacggtga cgtgtccttg gagagcaggt 60

gtgacggat 69

<210> SEQ ID NO 40
<211> LENGTH: 69
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 40

atccgtcaca cctgctctcc aaggacacgt caccgtattg gcccaacact atggtgttgg 60

ctcccgtat 69

<210> SEQ ID NO 41
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 41

atacgggagc caacaccaat gtcctcgtta caagaatatt tcctgttacg caccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 42
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 42

atccgtcaca cctgctctgg tgcgtaacag gaaatattct tgtaacgagg acattggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 43
<211> LENGTH: 69
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 43

atacgggagc caacaccata gtgttgggcc aatacggtaa cgtgtccttg gagagcaggt 60

gtgacggat 69

<210> SEQ ID NO 44
<211> LENGTH: 69
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 44

atccgtcaca cctgctctcc aaggacacgt taccgtattg gcccaacact atggtgttgg 60

ctcccgtat 69

<210> SEQ ID NO 45
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 45

atacgggagc caacaccaac tgaaaactaa gacttggttc caaatccttt ctctagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 46
<211> LENGTH: 72

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<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 46

atccgtcaca cctgctctag agaaaggatt tggaaccaag tcttagtttt cagttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 47
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 47

atacgggagc caacaccagg ccggagacta gccgaaccct acttttttact gtgtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 48
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 48

atccgtcaca cctgctctac acagtaaaaa gtagggttcg gctagtctcc ggcctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 49
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 49

atacgggagc caacaccacg tgctgactat actattcaaa aacaacaccc taggagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 50
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 50

atccgtcaca cctgctctcc tagggtgttg tttttgaata gtatagtcag cacgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 51
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 51

atacgggagc caacaccacg ccttgtctat tctcttagtt tcctgctact ccacagagca 60

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ggtgtgacgg at 72

<210> SEQ ID NO 52
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 52

atccgtcaca cctgctctgt ggagtagcag gaaactaaga gaatagacaa ggcgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 53
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 53

atacgggagc caacaccagg atagttacca gtcccttgtt aaaaatttat atgcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 54
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 54

atccgtcaca cctgctctgc atataaattt ttaacaaggg actggtaact atcctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 55
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 55

atacgggagc caacaccata gctttaggtt acttttcaga cactatatgt cccagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 56
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 56

atccgtcaca cctgctctgg gacatatagt gtctgaaaag taacctaaag ctatggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 57
<211> LENGTH: 69
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 57

atacgggagc caacaccaat gcccgcctcg atagagactg accagtatgt gagagcaggt 60

gtgacggat 69

<210> SEQ ID NO 58
<211> LENGTH: 69
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 58

atccgtcaca cctgctctca catactggtc agtctctatc gaggcgggca ttggtgttgg 60

ctcccgtat 69

<210> SEQ ID NO 59
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 59

atacgggagc caacaccacc tcatagttat gtaataacgc ttatcttgtc cggcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 60
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 60

atccgtcaca cctgctctgc cggacaagat aagcgttatt acataactat gaggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 61
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 61

atacgggagc caacaccacc catctcaacc accgtacctc actcggcgac ttacagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 62
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 62

atccgtcaca cctgctctgt aagtcgccga gtgaggtacg gtggttgaga tgggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 63

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<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 63

atacgggagc caacaccacg ctgtccccaa gacattcagt ctttgcaacc cggtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 64
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 64

atccgtcaca cctgctctac cgggttgcaa agactgaatg tcttggggac agcgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 65
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 65

atacgggagc caacaccacg ccatcccctt gacactacca ctaaatcggc ggtcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 66
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 66

atccgtcaca cctgctctga ccgccgattt agtggtagtg tcaaggggat ggcgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 67
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 67

atacgggagc caacaccaat agatggataa gggggaaact gccattcggt tagtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 68
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 68

atccgtcaca cctgctctac taaccgaatg gcagtttccc ccttatccat ctattggtgt 60

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tggctcccgt at 72

<210> SEQ ID NO 69
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 69

atacgggagc caacaccatt accaggacta actcgttttg cactggtctc agtcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 70
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 70

atccgtcaca cctgctctga ctgagaccag tgcaaaacga gttagtcctg gtaatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 71
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 71

atacgggagc caacaccacg gacgcgtaca gagtttattc ctgagatccg tgctagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 72
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 72

atccgtcaca cctgctctag cacggatctc aggaataaac tctgtacgcg tccgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 73
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 73

atacgggagc caacaccaga aaaaaacaaa cccaaggaat tacaccacaa aagtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 74
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:

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<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 74

atccgtcaca cctgctctac ttttgtggtg taattccttg ggtttgtttt tttctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 75
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 75

atacgggagc caacaccaca tgtattacac agctcgcatc ttcttacctg gcccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 76
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 76

atccgtcaca cctgctctgg gccaggtaag aagatgcgag ctgtgtaata catgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 77
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 77

atacgggagc caacaccagc ctttccacct acactagcta tcttatctcc ttatagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 78
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 78

atccgtcaca cctgctctat aaggagataa gatagctagt gtaggtggaa aggctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 79
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 79

atacgggagc caacaccatt aggttggaat ttacattcat gttctgtggt cataagagca 60

ggtgtgacgg at 72

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<210> SEQ ID NO 80
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 80

atccgtcaca cctgctctta tgaccacaga acatgaatgt aaattccaac ctaatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 81
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 81

atacgggagc caacaccaga gcacactaat catggcggcc cggcgcatcc cgacagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 82
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 82

atccgtcaca cctgctctgt cgggatgcgc cgggccgcca tgattagtgt gctctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 83
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 83

atacgggagc caacaccaaa ctagacaacc gcccttatac acactgtacc agtagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 84
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 84

atccgtcaca cctgctctac tggtacagtg tgtataaggg cggttgtcta gtttggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 85
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 85

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atacgggagc caacaccagc atccccgaat aaataatgct gcgctgttaa agatagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 86
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 86

atccgtcaca cctgctctat ctttaacagc gcagcattat ttattcgggg atgctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 87
<211> LENGTH: 70
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 87

atacgggagc caacaccaaa ttcctcgttg acccctaact gtactcttag ccagagcagg 60

tgtgacggat 70

<210> SEQ ID NO 88
<211> LENGTH: 70
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 88

atccgtcaca cctgctctgg ctaagagtac agttaggggt caacgaggaa tttggtgttg 60

gctcccgtat 70

<210> SEQ ID NO 89
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 89

atacgggagc caacaccacc cattctgaga ccccccgcgc atgtattggt cttgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 90
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 90

atccgtcaca cctgctctca agaccaatac atgcgcgggg ggtctcagaa tgggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 91
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence

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<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 91

atacgggagc caacaccatg ctagtgcccc cacagacgca cactaaagta ttccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 92
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 92

atccgtcaca cctgctctgg aatactttag tgtgcgtctg tgggggcact agcatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 93
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 93

atacgggagc caacaccagg ccgtgcgcgc tcattttgag aaccactgcc cccagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 94
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 94

atccgtcaca cctgctctgg gggcagtggt tctcaaaatg agcgcgcacg gcctggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 95
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 95

atacgggagc caacaccagt actacccacg ggcttattac cccctcatcc ttgcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 96
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 96

atccgtcaca cctgctctgc aaggatgagg gggtaataag cccgtgggta gtactggtgt 60

tggctcccgt at 72

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<210> SEQ ID NO 97
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 97

atacgggagc caacaccatt atgttaacaa aggcatacgg caagctctaa ctgtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 98
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 98

atccgtcaca cctgctctac agttagagct tgccgtatgc ctttgttaac ataatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 99
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 99

atacgggagc caacaccacc tcaagatagc cgttcatccg actgtcgcca ttgtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 100
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 100

atccgtcaca cctgctctac aatggcgaca gtcggatgaa cggctatctt gaggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 101
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 101

atacgggagc caacaccaca taatggacaa tcccactggg cacgttctat aaccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 102
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 102

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atccgtcaca cctgctctgg ttatagaacg tgcccagtgg gattgtccat tatgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 103
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 103

atacgggagc caacaccaag cccgagcccg ccgttatatc ccatcgagtt ccccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 104
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 104

atccgtcaca cctgctctgg ggaactcgat gggatataac ggcgggctcg ggcttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 105
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 105

atacgggagc caacaccatc ccaccgaata tccgctttcc tcgtcctcct ttcagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 106
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 106

atccgtcaca cctgctctga aaggaggacg aggaaagcgg atattcggtg ggatggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 107
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 107

atacgggagc caacaccaat agatggataa gggggaaact gccattcggt tagtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 108
<211> LENGTH: 72
<212> TYPE: DNA

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<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 108

atccgtcaca cctgctctac taaccgaatg gcagtttccc ccttatccat ctattggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 109
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 109

atacgggagc caacaccaca tctacgccca agcctctatg tacaagtagc aacaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 110
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 110

atccgtcaca cctgctcttg ttgctacttg tacatagagg cttgggcgta gatgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 111
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 111

atacgggagc caacaccaat ctccactgtg aaccttatcg agtttttgt acgagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 112
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 112

atccgtcaca cctgctctcg tacaaaaaac tcgataaggt tcacagtgga gattggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 113
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 113

atacgggagc caacaccata ggctataccg cgttagactt tctgagtcgt cctcagagca 60

ggtgtgacgg at 72

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<210> SEQ ID NO 114
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 114

atccgtcaca cctgctctga ggacgactca gaaagtctaa cgcggtatag cctatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 115
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 115

atacgggagc caacaccagc acgccctttt agtgtccaac tgaatcttca cctaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 116
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 116

atccgtcaca cctgctctta ggtgaagatt cagttggaca ctaaaagggc gtgctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 117
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 117

atacgggagc caacaccatg cttttggagt atttcgcctc caagctactc ccctagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 118
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 118

atccgtcaca cctgctctag gggagtagct tggaggcgaa atactccaaa agcatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 119
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 119

atacgggagc caacaccatt gatcctgccg gttcgcccct tgttcccacc ttttagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 120
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 120

atccgtcaca cctgctctaa aaggtgggaa caaggggcga accggcagga tcaatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 121
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 121

atacgggagc caacaccacc actgtttagg cacaacttgc tttcttagcc ccgcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 122
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 122

atccgtcaca cctgctctgc ggggctaaga aagcaagttg tgcctaaaca gtggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 123
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 123

atacgggagc caacaccacg cgtttattat gttccccatg attgccacgg ctacagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 124
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 124

atccgtcaca cctgctctgt agccgtggca atcatgggga acataataaa cgcgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 125
<211> LENGTH: 72

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<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 125

atacgggagc caacaccata tactgccgca gtttgggccc gcagtccatg ggcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 126
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 126

atccgtcaca cctgctcttg cccatggact gcgggcccaa actgcggcag tatatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 127
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 127

atacgggagc caacaccacc taagtaatgc caaaaacaac tcgggtacgc aatgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 128
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 128

atccgtcaca cctgctctca ttgcgtaccc gagttgtttt tggcattact taggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 129
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 129

atacgggagc caacaccact tctctgtgac cagtatacgt cccatttccc tattagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 130
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 130

atccgtcaca cctgctctaa tagggaaatg ggacgtatac tggtcacaga gaagtggtgt 60

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tggctcccgt at 72

<210> SEQ ID NO 131
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 131

atacgggagc caacaccagg atacgttccg tgcatggatg tgctgcccca tgttagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 132
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 132

atccgtcaca cctgctctaa catggggcag cacatccatg cacggaacgt atcctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 133
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 133

atacgggagc caacaccacc attttcgttt ttcttgagta tttcgacctt agtgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 134
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 134

atccgtcaca cctgctctca ctaaggtcga aatactcaag aaaaacgaaa atggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 135
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 135

atacgggagc caacaccatt cgaaacccat aatcttttcc tcactctgcg tattagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 136
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 136

atccgtcaca cctgctctaa tacgcagagt gaggaaaaga ttatgggttt cgaatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 137
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 137

atacgggagc caacaccacg catggggctc tccctattac gcaatccgtt gtagagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 138
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 138

atccgtcaca cctgctctct acaacggatt gcgtaatagg gagagcccca tgcgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 139
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 139

atacgggagc caacaccatc ttgtcctcgg tccgtctttg cattctggtc taaaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 140
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 140

atccgtcaca cctgctcttt tagaccagaa tgcaaagacg gaccgaggac aagatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 141
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 141

atacgggagc caacaccacc gctgtaagtg cttgggtcga ccgcgcccgc tgccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 142

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<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 142

atccgtcaca cctgctctgg cagcgggcgc ggtcgaccca agcacttaca gcggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 143
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 143

atacgggagc caacaccagg tgacgcaggt gagtctgcct ccccatgtgc tcccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 144
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 144

atccgtcaca cctgctctgg gagcacatgg ggaggcagac tcacctgcgt cacctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 145
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 145

atacgggagc caacaccaat agatggataa gggggaaact gccattcggt tagtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 146
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 146

atccgtcaca cctgctctac taaccgaatg gcagtttccc ccttatccat ctattggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 147
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 147

atacgggagc caacaccact tccgggctat accggggctc gcgcaattct gaccagagca 60

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ggtgtgacgg at 72

<210> SEQ ID NO 148
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 148

atccgtcaca cctgctctgg tcagaattgc gcgagccccg gtatagcccg gaagtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 149
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 149

atacgggagc caacaccaat agatggataa gggggaaact gccattcggt tagtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 150
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 150

atccgtcaca cctgctctac taaccgaatg gcagtttccc ccttatccat ctattggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 151
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 151

atacgggagc caacaccagt cttttattca tcatgatcgc tgacctacac cccaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 152
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 152

atccgtcaca cctgctcttg gggtgtaggt cagcgatcat gatgaataaa agactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 153
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:

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<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 153

atacgggagc caacaccact tcaaaagtca gatacaaaga cagagattgg acttagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 154
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 154

atccgtcaca cctgctctaa gtccaatctc tgtctttgta tctgactttt gaagtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 155
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 155

atacgggagc caacaccatt atgttaacaa aggcatacgg caagctctaa ctgtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 156
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 156

atccgtcaca cctgctctac agttagagct tgccgtatgc ctttgttaac ataatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 157
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 157

atacgggagc caacaccata atattacaat gccagaatct acacataatc ctatagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 158
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 158

atccgtcaca cctgctctat aggattatgt gtagattctg gcattgtaat attatggtgt 60

tggctcccgt at 72

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<210> SEQ ID NO 159
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 159

atacgggagc caacaccatt atgttaacaa aggcatacgg caagctctaa ctgtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 160
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 160

atccgtcaca cctgctctac agttagagct tgccgtatgc ctttgttaac ataatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 161
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 161

atacgggagc caacaccact tgacgccgtg gcaacacgct gacgagcttt acccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 162
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 162

atccgtcaca cctgctctgg gtaaagctcg tcagcgtgtt gccacggcgt caagtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 163
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 163

atacgggagc caacaccagc caactcacta ttacttagta accctaacga tggcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 164
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 164

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atccgtcaca cctgctctgc catcgttagg gttactaagt aatagtgagt tggctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 165
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 165

atacgggagc caacaccata cgatccaatg atggacccgt gcggactgat ttacagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 166
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 166

atccgtcaca cctgctctgt aaatcagtcc gcacgggtcc atcattggat cgtatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 167
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 167

atacgggagc caacaccatt ccatctccat gtagctaaag tcgatactcc atccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 168
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 168

atccgtcaca cctgctctgg atggagtatc gactttagct acatggagat ggaatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 169
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 169

atacgggagc caacaccaca cagaggacgg ttcgtcagat gccgtttgcc acgaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 170
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence

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<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 170

atccgtcaca cctgctcttc gtggcaaacg gcatctgacg aaccgtcctc tgtgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 171
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 171

atacgggagc caacaccaaa aaaggtcttc tcccacgatg tgtccaatgc atccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 172
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 172

atccgtcaca cctgctctgg atgcattgga cacatcgtgg gagaagacct tttttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 173
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 173

atacgggagc caacaccacc gcctcgaccg ctcggggccc ttaccctagc ttcagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 174
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 174

atccgtcaca cctgctctga agctagggta agggccccga gcggtcgagg cggtggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 175
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 175

atacgggagc caacaccacc acaaccgtag ggacccgcct ggtccccaac ctagagagca 60

ggtgtgacgg at 72

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<210> SEQ ID NO 176
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 176

atccgtcaca cctgctctct aggttgggga ccaggcgggt ccctacggtt gtggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 177
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 177

atacgggagc caacaccacc tcggatggtt atgatatagt ttacaatcat gaagagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 178
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 178

atccgtcaca cctgctctct tcatgattgt aaactatatc ataaccatcc gaggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 179
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 179

atacgggagc caacaccaca tagccaacct cagccacacc gactacgctt ggccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 180
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 180

atccgtcaca cctgctctgg ccaagcgtag tcggtgtggc tgaggttggc tatgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 181
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 181

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atacgggagc caacaccatt tatctaatgg caactaggga tagtgaaaac taccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 182
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 182

atccgtcaca cctgctctcc tcctaggaat gtagtcgggc ggataaagtg acaatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 183
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 183

atacgggagc caacaccatt gtcactttat ccgcccgact acattcctag gaggagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 184
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 184

atccgtcaca cctgctctcc tcctaggaat gtagtcgggc ggataaagtg acaatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 185
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 185

atacgggagc caacaccacc ttcgacgcca acgacgaacg gctttgaaag gctaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 186
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 186

atccgtcaca cctgctctta gcctttcaaa gccgttcgtc gttggcgtcg aaggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 187
<211> LENGTH: 72
<212> TYPE: DNA

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<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 187

atacgggagc caacaccaat ggaagccgta ccttcacacc cgttatttaa aaacagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 188
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 188

atccgtcaca cctgctctgt ttttaaataa cgggtgtgaa ggtacggctt ccattggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 189
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 189

atacgggagc caacaccacg ctggccggga ggcccgtcca agccattacc gtcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 190
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 190

atccgtcaca cctgctcttg acggtaatgg cttggacggg cctcccggcc agcgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 191
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 191

atacgggagc caacaccaca tatcaccgca cgcctattcc atgtgacgaa tctaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 192
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 192

atccgtcaca cctgctctta gattcgtcac atggaatagg cgtgcggtga tatgtggtgt 60

tggctcccgt at 72

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<210> SEQ ID NO 193
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 193

atacgggagc caacaccacg gcgggcgggg catctcgtgg gggacgaagg cgcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 194
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 194

atccgtcaca cctgctcttg cgccttcgtc ccccacgaga tgccccgccc gccgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 195
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 195

atacgggagc caacaccatc ctcctgcgac gtctggagaa cagcctctac tttaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 196
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 196

atccgtcaca cctgctctta aagtagaggc tgttctccag acgtcgcagg aggatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 197
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 197

atacgggagc caacaccaaa acccgcacta catctcctct gccccccttct gataagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 198
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 198

atccgtcaca cctgctctta tcagaagggg gcagaggaga tgtagtgcgg gttttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 199
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 199

atacgggagc caacaccagt ggtcttgttt tggatgttta gtgatgcggg ttctagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 200
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 200

atccgtcaca cctgctctag aacccgcatc actaaacatc caaaacaaga ccactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 201
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 201

atacgggagc caacaccatc tttcgtgata gctattaagg cctattcgta tcgtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 202
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 202

atccgtcaca cctgctctac gatacgaata ggccttaata gctatcacga aagatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 203
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 203

atacgggagc caacaccata ctgaagccat acgtctgtcc aaccgtcata acttagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 204
<211> LENGTH: 72

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<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 204

atccgtcaca cctgctctaa gttatgacgg ttggacagac gtatggcttc agtatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 205
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 205

atacgggagc caacaccacc ctaaattcca gagtgtacaa gagaacgaac taccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 206
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 206

atccgtcaca cctgctctgg tagttcgttc tcttgtacac tctggaattt agggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 207
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 207

atacgggagc caacaccact actcatatac cttatactat aaacaatctg cgcgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 208
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 208

atccgtcaca cctgctctcg cgcagattgt ttatagtata aggtatatga gtagtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 209
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 209

atacgggagc caacaccaca ttcgtactag ccccggttgc ccgtcgaccg gacaagagca 60

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ggtgtgacgg at 72

<210> SEQ ID NO 210
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 210

atacgggagc caacaccagg agggcgcgcc tatttcgcca attcgtccgc agcgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 211
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 211

atccgtcaca cctgctcttg tccggtcgac gggcaaccgg ggctagtacg aatgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 212
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 212

atccgtcaca cctgctctcg ctgcggacga attggcgaaa taggcgcgcc ctcctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 213
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 213

atacgggagc caacaccaca cattatcggc aactggcaag gctaaggtac tggtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 214
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 214

atccgtcaca cctgctctac cagtaccttа gccttgccag ttgccgataa tgtgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 215
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 215

atacgggagc caacaccact ggcgacccac tcccctggta cgtcaccaca gcctagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 216
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 216

atccgtcaca cctgctctag gctgtggtga cgtaccaggg gagtgggtcg ccagtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 217
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 217

atacgggagc caacaccaag acaaccgagc taataggcat ttcaacacct gtccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 218
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 218

atccgtcaca cctgctctgg acaggtgttg aaatgcctat tagctcggtt gtcttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 219
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 219

atacgggagc caacaccaga agaccatgtg aagtaaagac ttcaattatc agtcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 220
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 220

atccgtcaca cctgctctga ctgataattg aagtctttac ttcacatggt cttctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 221

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<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 221

atacgggagc caacaccaca ataaatccgt gcgcgtgacg cgtttcatac agtcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 222
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 222

atccgtcaca cctgctctga ctgtatgaaa cgcgtcacgc gcacggattt attgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 223
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 223

atacgggagc caacaccact attggctata cattcgttgt gagaaacgca ccgcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 224
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 224

atccgtcaca cctgctctgc ggtgcgtttc tcacaacgaa tgtatagcca atagtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 225
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 225

atacgggagc caacaccatg gggaccaact gtccggagag agtcctgtcg agggagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 226
<211> LENGTH: 68
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 226

atacgggagc caacaccaca tagacacaag atatatcata tattgctcgc agagcaggtg 60

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tgacggat 68

<210> SEQ ID NO 227
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 227

atccgtcaca cctgctctcc ctcgacagga ctctctccgg acagttggtc cccatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 228
<211> LENGTH: 68
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 228

atccgtcaca cctgctctgc gagcaatata tgatatatct tgtgtctatg tggtgttggc 60

tcccgtat 68

<210> SEQ ID NO 229
<211> LENGTH: 69
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 229

atacgggagc caacaccatt gtagctgaca actgttttac atgaacactt cagagcaggt 60

gtgacggat 69

<210> SEQ ID NO 230
<211> LENGTH: 69
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 230

atccgtcaca cctgctctga agtgttcatg taaaacagtt gtcagctaca atggtgttgg 60

ctcccgtat 69

<210> SEQ ID NO 231
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 231

atacgggagc caacaccagg gtgccagcag attataattg aacaaaccag cgatagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 232
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:

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<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 232

atccgtcaca cctgctctat cgctggtttg ttcaattata atctgctggc accctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 233
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 233

atacgggagc caacaccagc acatagaaaa aaaatacaac cacatcgatt gaccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 234
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 234

atccgtcaca cctgctctgg tcaatcgatg tggttgtatt ttttttctat gtgctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 235
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 235

atacgggagc caacaccaac caggtattgt ccaaaatgga aacaaatgag gaatagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 236
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 236

atccgtcaca cctgctctat tcctcatttg tttccatttt ggacaatacc tggttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 237
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 237

atacgggagc caacaccaca cacaaaagga attgtatact cgcataaggc cgccagagca 60

ggtgtgacgg at 72

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<210> SEQ ID NO 238
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 238

atccgtcaca cctgctctgg cggccttatg cgagtataca attccttttg tgtgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 239
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 239

atacgggagc caacaccaga aacgtggact gtgtaggcaa acctattatt ttctagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 240
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 240

atccgtcaca cctgctctag aaaataatag gtttgcctac acagtccacg tttctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 241
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 241

atacgggagc caacaccagc gcaattgatg actaccctaa gaaatctatt ggccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 242
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 242

atccgtcaca cctgctctgg ccaatagatt tcttagggta gtcatcaatt gcgctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 243
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 243

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atacgggagc caacaccacg gccgaggtcc actaccccta tggctggccc ttccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 244
<211> LENGTH: 69
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 244

atacgggagc caacaccagc ctacgggtgg atgatccgcg gtgttcgagt gttagagcag 60

gtgtgacgg 69

<210> SEQ ID NO 245
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 245

atccgtcaca cctgctctgg aagggccagc catagggta gtggacctcg gccgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 246
<211> LENGTH: 69
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 246

ccgtcacacc tgctctaaca ctcgaacacc gcggatcatc cacccgtagg ctggtgttgg 60

ctcccgtat 69

<210> SEQ ID NO 247
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 247

atacgggagc caacaccatg cagtatccac cttctctttt ttctcactcc actgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 248
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 248

atccgtcaca cctgctctca gtggagtgag aaaaaagaga aggtggatac tgcatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 249
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence

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<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 249

atccgtcaca cctgctctcg aatgggacaa cttctcgata tctactatgg ttggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 250
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 250

atacgggagc caacaccacc aaccatagta gatatcgaga agttgtccca ttcgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 251
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 251

atacgggagc caacaccagg gatgggtaaa gaaagtcgcg agacgatgat gccagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 252
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 252

atccgtcaca cctgctctgg catcatcgtc tcgcgacttt ctttacccat ccctggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 253
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 253

atacgggagc caacaccacg acatccgttc tgaacacacg atagtgatga ttgtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 254
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 254

atccgtcaca cctgctctac aatcatcact atcgtgtgtt cagaacggat gtcgtggtgt 60

tggctcccgt at 72

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<210> SEQ ID NO 255
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 255

atacgggagc caacaccacg gtattgtaaa gaaatgaaat cagtaatata ttccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 256
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 256

atccgtcaca cctgctctgg aatatattac tgatttcatt tctttacaat accgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 257
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 257

atacgggagc caacaccata caaaaatccg aagttaagac agctcacgct tatcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 258
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 258

atccgtcaca cctgctctga taagcgtgag ctgtcttaac ttcggatttt tgtatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 259
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 259

atacgggagc caacaccata catggcagct cctacagatc accactctaa gagtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 260
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 260

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atccgtcaca cctgctctac tcttagagtg gtgatctgta ggagctgcca tgtatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 261
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 261

atacgggagc caacaccaca actcaccagg acactcggcc gcccggtccc caatagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 262
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 262

atccgtcaca cctgctctat tggggaccgg gcggccgagt gtcctggtga gttgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 263
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 263

atacgggagc caacaccagt tgacaacaca tgactctaca cgatatgtca cacaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 264
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 264

atccgtcaca cctgctcttg tgtgacatat cgtgtagagt catgtgttgt caactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 265
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 265

atacgggagc caacaccagg ctatgaagaa agaaaaatga gtaacacata acgcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 266
<211> LENGTH: 72
<212> TYPE: DNA

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<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 266

atccgtcaca cctgctctgc gttatgtgtt actcattttt ctttcttcat agcctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 267
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 267

atacgggagc caacaccacg ccccccctca ctactgtccc gccccccgcc gtggagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 268
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 268

atccgtcaca cctgctctcc acggcggggg gcgggacagt agtgaggggg ggcgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 269
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 269

atacgggagc caacaccacc ggccaacgaa agacctcgct cactagacac ccctagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 270
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 270

atacgggagc caacaccacc agaaaatcaa tataacaacg tatgctggct ccgagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 271
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 271

atccgtcaca cctgctctag gggtgtctag tgagcgaggt ctttcgttgg ccggtggtgt 60

tggctcccgt at 72

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<210> SEQ ID NO 272
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 272

atccgtcaca cctgctctcg gagccagcat acgttgttat attgattttc tggtggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 273
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 273

atacgggagc caacaccaat agatggataa gggggaaact gccattcggt tagtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 274
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 274

atccgtcaca cctgctctac taaccgaatg gcagtttccc ccttatccat ctattggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 275
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 275

atacgggagc caacaccaga ttgaagctca agcctaaagg tgaccaaagg tagaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 276
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 276

atccgtcaca cctgctcttc tacctttggt caccttttagg cttgagcttc aatctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 277
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 277

atacgggagc caacaccaca ggagaggcag taaaagggtt ggctgcctgg gtagagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 278
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 278

atccgtcaca cctgctctct acccaggcag ccaacccttt tactgcctct cctgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 279
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 279

atacgggagc caacaccatt attactgagc tgtgcgccgc tacctgccta gattagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 280
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 280

atccgtcaca cctgctctaa tctaggcagg tagcggcgca cagctcagta ataatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 281
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 281

atacgggagc caacaccaat gcgggcttcc tactccaacc caggaccttc accagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 282
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 282

atccgtcaca cctgctctgg tgaaggtcct gggttggagt aggaagcccg cattggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 283
<211> LENGTH: 72

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<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 283

atacgggagc caacaccacg cggctgtcta tgaccgggct tgttgtttct gctaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 284
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 284

atccgtcaca cctgctctta gcagaaacaa caagcccggt catagacagc cgcgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 285
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 285

atacgggagc caacaccaca ggagaggcag taaaagggtt ggctgcctgg gtagagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 286
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 286

atccgtcaca cctgctctct acccaggcag ccaacccttt tactgcctct cctgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 287
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 287

atacgggagc caacaccacg aggattacaa ctttatgcgt gcaaccagac accaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 288
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 288

atccgtcaca cctgctcttg gtgtctggtt gcacgcataa agttgtaatc ctcgtggtgt 60

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tggctcccgt at 72

<210> SEQ ID NO 289
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 289

atacgggagc caacaccacc tacagatccg cgaaccagcc gactactcgt ccacagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 290
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 290

atccgtcaca cctgctctgt ggacgagtag tcggctggtt cgcggatctg taggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 291
<211> LENGTH: 59
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 291

atacgggagc caacaccaca gctgatattg gatggtccgg cagagcaggt gtgacggat 59

<210> SEQ ID NO 292
<211> LENGTH: 59
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 292

atccgtcaca cctgctctgc cggaccatcc aatatcagct gtggtgttgg ctcccgtat 59

<210> SEQ ID NO 293
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 293

atacgggagc caacaccaca ggagaggcag taaaagggtt ggctgcctgg gtagagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 294
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 294

atccgtcaca cctgctctct acccaggcag ccaacccttt tactgcctct cctgtggtgt 60

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tggctcccgt at 72

<210> SEQ ID NO 295
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 295

atacgggagc caacaccaag ctctcacgtg acacagtgct ccgccgtcaa aatgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 296
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 296

atccgtcaca cctgctctca ttttgacggc ggagcactgt gtcacgtgag agcttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 297
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 297

atacgggagc caacaccatc ccgcgcccac tgcttgtcac ctcttagccc ccgcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 298
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 298

atccgtcaca cctgctctgc gggggctaag aggtgacaag cagtgggcgc gggatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 299
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 299

atacgggagc caacaccaac ccaataaact tattggacct acgctttgat gattagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 300
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:

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<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 300

atccgtcaca cctgctctaa tcatcaaagc gtaggtccaa taagtttatt gggttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 301
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 301

atacgggagc caacaccaca ctgcatccct ctaccgtact tacattcctg acatagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 302
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 302

atccgtcaca cctgctctat gtcaggaatg taagtacggt agagggatgc agtgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 303
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 303

atacgggagc caacaccatg tcaggacctc catcgcccgg gcccgccgcc gctgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 304
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 304

atccgtcaca cctgctctca gcggcggcgg gcccgggcga tggaggtcct gacatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 305
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 305

atacgggagc caacaccacc ccgtcgccaa gcacttggct gggctctaac ggccagagca 60

ggtgtgacgg at 72

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<210> SEQ ID NO 306
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 306

atccgtcaca cctgctctgg ccgttagagc ccagccaagt gcttggcgac ggggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 307
<211> LENGTH: 59
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 307

atacgggagc caacaccaca gctgatatcg gatggtccgg cagagcaggt gtgacggat 59

<210> SEQ ID NO 308
<211> LENGTH: 59
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 308

atccgtcaca cctgctctgc cggaccatcc gatatcagct gtggtgttgg ctcccgtat 59

<210> SEQ ID NO 309
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 309

atacgggagc caacaccacc cgtggccttc acccagccag gggccccgtc tctgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 310
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 310

atccgtcaca cctgctctca gagacggggc ccctggctgg gtgaaggcca cgggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 311
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 311

atacgggagc caacaccatg tctcttagga tacaaagcca aactgagccc gtgcagagca 60

ggtgtgacgg at 72

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<210> SEQ ID NO 312
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 312

atccgtcaca cctgctctgc acgggctcag tttggctttg tatcctaaga gacatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 313
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 313

atacgggagc caacaccagt cacagtgtct ggccagaatg ccaagggaat cgttagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 314
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 314

atccgtcaca cctgctctaa cgattccctt ggcattctgg ccagacactg tgactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 315
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 315

atacgggagc caacaccaac actaatacta atgccattat gcgtgatcta tttagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 316
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 316

atccgtcaca cctgctctaa atagatcacg cataatggca ttagtattag tgttggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 317
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 317

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atacgggagc caacaccata acaaataacc accctcaatg ctagatagtg gcttagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 318
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 318

atccgtcaca cctgctctaa gccactatct agcattgagg gtggttattt gttatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 319
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 319

atacgggagc caacaccagc acttacccac ctataaggaa tattctagat cggaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 320
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 320

atccgtcaca cctgctcttc cgatctagaa tattccttat aggtgggtaa gtgctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 321
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 321

atacgggagc caacaccatc gggcattaac atggaatatc cttccccagc gtctagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 322
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 322

atccgtcaca cctgctctag acgctgggga aggatattcc atgttaatgc ccgatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 323
<211> LENGTH: 72
<212> TYPE: DNA

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<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 323

atacgggagc caacaccagt ccacacttga ccacaaaaca taatcccata ttgtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 324
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 324

atccgtcaca cctgctctac aatatgggat tatgttttgt ggtcaagtgt ggactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 325
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 325

atacgggagc caacaccata agatagtaaa gctagagaca tctcagagca ggagagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 326
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 326

atccgtcaca cctgctctct cctgctctga gatgtctcta gctttactat cttatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 327
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 327

atacgggagc caacaccaaa ggcaacagtc tcttcctact attaaaacga aacgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 328
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 328

atccgtcaca cctgctctcg tttcgtttta atagtaggaa gagactgttg cctttggtgt 60

tggctcccgt at 72

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<210> SEQ ID NO 329
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 329

atacgggagc caacaccagc gtcataatat tcctgttgtg gccctattgg acggagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 330
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 330

atccgtcaca cctgctctcc gtccaatagg gccacaacag gaatattatg acgctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 331
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 331

atacgggagc caacaccaaa tatctaacca tacatttata caagtggttc atagagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 332
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 332

atccgtcaca cctgctctct atgaaccact tgtataaatg tatggttaga tatttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 333
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 333

atacgggagc caacaccaca agttcaacga gttgataaca caacatgacc gcccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 334
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 334

atccgtcaca cctgctctgg gcggtcatgt tgtgttatca actcgttgaa cttgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 335
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 335

atacgggagc caacaccact aataaaaatg aaaaacaccc ctcaacaccc atgagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 336
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 336

atccgtcaca cctgctctca tgggtgttga ggggtgtttt tcatttttat tagtggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 337
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 337

atacgggagc caacaccaca ttgagcgtaa gcaccacgcc ttctaggtcg agctagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 338
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 338

atccgtcaca cctgctctag ctcgacctag aaggcgtggt gcttacgctc aatgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 339
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 339

atacgggagc caacaccata gtcgttctga catgtacttt tgaggaaatg gtgcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 340
<211> LENGTH: 73

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<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 340

ratccgtcac acctgctctg caccatttcc tcaaaagtac atgtcagaac gactatggtg 60

ttggctcccg tat 73

<210> SEQ ID NO 341
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 341

atacgggagc caacaccatt actcgctctg tatgcgcctc ccaccctctg atagagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 342
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 342

atccgtcaca cctgctctct atcagagggt gggaggcgca tacagagcga gtaatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 343
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 343

atacgggagc caacaccaga gtcggctaca gaggtctgat gttaaagcga tggtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 344
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 344

atccgtcaca cctgctctac catcgcttta acatcagacc tctgtagccg actctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 345
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 345

atacgggagc caacaccaca ccattctggc cccctcccct tcaccgatcc tctcagagca 60

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ggtgtgacgg at 72

<210> SEQ ID NO 346
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 346

atccgtcaca cctgctctga gaggatcggt gaaggggagg gggccagaat ggtgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 347
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 347

atacgggagc caacaccagc actgcagtta acatttacga agaggcttta atgcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 348
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 348

atccgtcaca cctgctctgc attaaagcct cttcgtaaat gttaactgca gtgctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 349
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 349

atacgggagc caacaccaac ccggcgttat atcacctcat ggagaaaagt gcgtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 350
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 350

atccgtcaca cctgctctac gcacttttct ccatgaggtg atataacgcc gggttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 351
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 351

atacgggagc caacaccagc acaacttaag tgcaagcaaa ttcggattaa ccaaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 352
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 352

atccgtcaca cctgctcttt ggttaatccg aatttgcttg cacttaagtt gtgctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 353
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 353

atacgggagc caacaccacg actacattgt gttcaagcgc cgaagacgct atcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 354
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 354

atccgtcaca cctgctcttg atagcgtctt cggcgcttga acacaatgta gtcgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 355
<211> LENGTH: 70
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 355

atacgggagc caacaccagc ataccagcaa cggaagctgc ccaaagaatt tcagagcagg 60

tgtgacggat 70

<210> SEQ ID NO 356
<211> LENGTH: 70
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 356

atccgtcaca cctgctctga aattctttgg gcagcttccg ttgctggtat gctggtgttg 60

gctcccgtat 70

<210> SEQ ID NO 357

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<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 357

atacgggagc caacaccaat gctaaatacc gatgcttttc aatgtgatgg tcaagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 358
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 358

atccgtcaca cctgctcttg accatcacat tgaaaagcat cggtatttag cattggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 359
<211> LENGTH: 70
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 359

atacgggagc caacaccatc cgggccatgg tagagtgtta taatcgaaca aaagagcagg 60

tgtgacggat 70

<210> SEQ ID NO 360
<211> LENGTH: 70
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 360

atccgtcaca cctgctcttt tgttcgatta taacactcta ccatggcccg gatggtgttg 60

gctcccgtat 70

<210> SEQ ID NO 361
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 361

atacgggagc caacaccaag tccaagccaa acaagagcat aacaccaaat ctggagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 362
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 362

atccgtcaca cctgctctcc agatttggtg ttatgctctt gtttggcttg gacttggtgt 60

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tggctcccgt at 72

<210> SEQ ID NO 363
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 363

atacgggagc caacaccaat gctaaatacc gatgcttttc aatgtgatgg tcaagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 364
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 364

atccgtcaca cctgctcttg accatcacat tgaaaagcat cggtatttag cattggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 365
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 365

atacgggagc caacaccaca tagctactac agaactcagg gctaaagtct tatagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 366
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 366

atccgtcaca cctgctctat aagactttag ccctgagttc tgtagtagct atgtggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 367
<211> LENGTH: 70
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 367

atacgggagc caacaccagc ataccagcaa cggaagctgc ccaaagaatt tcagagcagg 60

tgtgacggat 70

<210> SEQ ID NO 368
<211> LENGTH: 70
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:

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<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 368

atccgtcaca cctgctctga aattctttgg gcagcttccg ttgctggtat gctggtgttg 60

gctcccgtat 70

<210> SEQ ID NO 369
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 369

atacgggagc caacaccaga tcgatatatg acaccaggta caccacagac ttgcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 370
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 370

atccgtcaca cctgctctgc aagtctgtgg tgtacctggt gtcatatatc gatctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 371
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 371

atacgggagc caacaccatc tactcgaaca tcttaaaagc agtctaagca aactagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 372
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 372

atccgtcaca cctgctctag tttgcttaga ctgcttttaa gatgttcgag tagatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 373
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 373

atacgggagc caacaccata gatcttttac gaacaccgcc gaagattatc atttagagca 60

ggtgtgacgg at 72

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<210> SEQ ID NO 374
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 374

atccgtcaca cctgctctaa atgataatct tcggcggtgt tcgtaaaaga tctatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 375
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 375

atacgggagc caacaccaaa tgatgaatag gcaacttgcg gtgccacgat cttgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 376
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 376

atccgtcaca cctgctctca agatcgtggc accgcaagtt gcctattcat catttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 377
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 377

atacgggagc caacaccatc ggccgaatag atataattca caaagagtgt ccccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 378
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 378

atccgtcaca cctgctctgg ggacactctt tgtgaattat atctattcgg ccgatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 379
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 379

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atacgggagc caacaccaga aaatgaatac ttcccaagct tgtcaagcaa gtaagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 380
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 380

atccgtcaca cctgctctta cttgcttgac aagcttggga agtattcatt ttctggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 381
<211> LENGTH: 70
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 381

atacgggagc caacaccaaa caggctgagt gtactgctac cttgcagtat caagagcagg 60

tgtgacggat 70

<210> SEQ ID NO 382
<211> LENGTH: 70
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 382

atccgtcaca cctgctcttg atactgcaag gtagcagtac actcagcctg tttggtgttg 60

gctcccgtat 70

<210> SEQ ID NO 383
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 383

atacgggagc caacaccaga ttttccagca aatccagtcc ctatatgtgc ttgaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 384
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 384

atccgtcaca cctgctcttc aagcacatat agggactgga tttgctggaa aatctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 385
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence

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<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 385

atacgggagc caacaccaac aaccaccagt caagacccaa cgcgtggcga ggaaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 386
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 386

atccgtcaca cctgctcttt cctcgccacg cgttgggtct tgactggtgg ttgttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 387
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 387

atacgggagc caacaccagg gatatgctga atatgcattg tcacgctgaa gtcagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 388
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 388

atccgtcaca cctgctctga cttcagcgtg acaatgcata ttcagcatat ccctggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 389
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 389

atacgggagc caacaccaat acaacaagtc aaaaagaaat agaaagttga acgagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 390
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 390

atccgtcaca cctgctctcg ttcaactttc tatttctttt tgacttgttg tattggtgtt 60

ggctcccgta t 71

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<210> SEQ ID NO 391
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 391

atacgggagc caacaccaaa cagacgtttg gggcaatgat ataaagttaa tcaagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 392
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 392

atccgtcaca cctgctcttg attaacttta tatcattgcc ccaaacgtct gtttggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 393
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 393

atacgggagc caacaccata acggttccct taatgcgcta cccacactat acaagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 394
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 394

atccgtcaca cctgctcttg tatagtgtgg gtagcgcatt aagggaaccg ttatggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 395
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 395

atacgggagc caacaccagc gctgcctgta tggcagacct acctgaccct ctttagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 396
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 396

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atccgtcaca cctgctctaa agagggtcag gtaggtctgc catacaggca gcgctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 397
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 397

atacgggagc caacaccaag atgcgagcca atagtgtcac aataattgtc cgaaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 398
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 398

atccgtcaca cctgctcttt cggacaatta ttgtgacact attggctcgc atcttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 399
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 399

atacgggagc caacaccaag atatagactc taattgatta ccattcatag gaaaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 400
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 400

atccgtcaca cctgctcttt tcctatgaat ggtaatcaat tagagtctat atcttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 401
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 401

atacgggagc caacaccatc cagttccaat tacgcgtaga tagtcacaat ccaaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 402
<211> LENGTH: 72
<212> TYPE: DNA

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<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 402

atccgtcaca cctgctcttt ggattgtgac tatctacgcg taattggaac tggatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 403
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 403

atacgggagc caacaccact tacctcccct accacacctc caactaaaac ctgaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 404
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 404

atccgtcaca cctgctcttc aggttttagt tggaggtgtg gtaggggagg taagtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 405
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 405

atacgggagc caacaccagg atcaaaccac ttgccgtcaa ggcaatggcc cctcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 406
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 406

atccgtcaca cctgctctga ggggccattg ccttgacggc aagtggtttg atcctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 407
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 407

atacgggagc caacaccacc cgtttttgat ctaatgagga tacaatattc gtctagagca 60

ggtgtgacgg at 72

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<210> SEQ ID NO 408
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 408

atccgtcaca cctgctctag acgaatattg tatcctcatt agatcaaaaa cgggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 409
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 409

atacgggagc caacaccacc cctccggacc cacccctgat gccacgtgcc cctgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 410
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 410

atccgtcaca cctgctctca ggggcacgtg gcatcagggg tgggtccgga ggggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 411
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 411

atacgggagc caacaccaga ccctgcccca gcccccttagc cccggcgcgc gacgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 412
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 412

atccgtcaca cctgctctcg tcgcgcgccg gggctaaggg gctggggcag ggtctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 413
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 413

atacgggagc caacaccaca cacagagcgc catggactca gtcagatgtg atgtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 414
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 414

atccgtcaca cctgctctac atcacatctg actgagtcca tggcgctctg tgtgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 415
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 415

atacgggagc caacaccacg gcacgaagac gaggtgaaaa gtcagcttag tgaaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 416
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 416

atccgtcaca cctgctcttt cactaagctg acttttcacc tcgtcttcgt gccgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 417
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 417

atacgggagc caacaccaca ccccatgaga tcaccattca ctcgcacccc cacgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 418
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 418

atccgtcaca cctgctctcg tgggggtgcg agtgaatggt gatctcatgg ggtgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 419
<211> LENGTH: 72

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<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 419

atacgggagc caacaccagg ctatttgtta gcgctctcta gttccacatg accaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 420
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 420

atccgtcaca cctgctcttg gtcatgtgga actagagagc gctaacaaat agcctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 421
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 421

atacgggagc caacaccatg gctggtacac tcccggttcc ctgccgttga gcccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 422
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 422

atccgtcaca cctgctctgg gctcaacggc agggaaccgg gagtgtacca gccatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 423
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 423

atacgggagc caacaccacg gggtgggtcg aacccttgtc tgggaggtgc ttctagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 424
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 424

atccgtcaca cctgctctag aagcacctcc cagacaaggg ttcgacccac cccgtggtgt 60

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tggctcccgt at 72

<210> SEQ ID NO 425
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 425

atacgggagc caacaccaat cttactagtt tgggaaaaaa attaaatata agcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 426
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 426

atccgtcaca cctgctcttg cttatattta attttttcc caaactagta agattggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 427
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 427

atacgggagc caacaccaat tatccactga taacgaaaag atctggacag ttgtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 428
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 428

atccgtcaca cctgctctac aactgtccag atcttttcgt tatcagtgga taattggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 429
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 429

atacgggagc caacaccagt tgacttaggg tcaaactatg gacactcacc cgtaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 430
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 430

atccgtcaca cctgctctta cgggtgagtg tccatagttt gaccctaagt caactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 431
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 431

atacgggagc caacaccact actagacatc gtagcccgac gtccgtggat tgggagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 432
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 432

atccgtcaca cctgctctcc caatccacgg acgtcgggct acgatgtcta gtagtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 433
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 433

atacgggagc caacaccaga tataccgtaa cattaataga caagttaaat acccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 434
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 434

atccgtcaca cctgctctgg gtatttaact tgtctattaa tgttacggta tatctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 435
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 435

atacgggagc caacaccaac atagtgctcg catcctatgg cgtaacgaga ctacagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 436

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<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 436

atccgtcaca cctgctctgt agtctcgtta cgccatagga tgcgagcact atgttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 437
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 437

atacgggagc caacaccacc aacgaatact accaggccta gcacaataca caacagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 438
<211> LENGTH: 66
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 438

atccgtcaca cctgctctgt tgtgtattgt gctaggcctg gtagtattcg ttgttggctc 60

ccgtat 66

<210> SEQ ID NO 439
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 439

atacgggagc caacaccatt agaaaagaca tcgctaaatg acgggcacga atgagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 440
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 440

atccgtcaca cctgctctca ttcgtgcccg tcatttagcg atgtcttttc taatggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 441
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 441

atacgggagc caacaccaca aatgaataaa atttcggaaa aggcaagcag gataagagca 60

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ggtgtgacgg at 72

<210> SEQ ID NO 442
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 442

atccgtcaca cctgctctta tcctgcttgc cttttccgaa attttattca tttgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 443
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 443

atacgggagc caacaccatt atgttaacaa aggcatacgg caagctctaa ctgtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 444
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 444

atccgtcaca cctgctctac agttagagct tgccgtatgc ctttgttaac ataatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 445
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 445

atacgggagc caacaccata agaaccacca ctccgcgttc gcctcccgag gtgtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 446
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 446

atccgtcaca cctgctctac acctcgggag gcgaacgcgg agtggtggtt cttatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 447
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:

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<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 447

atacgggagc caacaccatc atggcgatac agttatctgc attgttccat ccctagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 448
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 448

atccgtcaca cctgctctag ggatggaaca atgcagataa ctgtatcgcc atgatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 449
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 449

atacgggagc caacaccagc cctgggccag cccgtgactt tcccccggcg tccaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 450
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 450

atccgtcaca cctgctcttg gacgccgggg gaaagtcacg ggctggccca gggctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 451
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 451

atacgggagc caacaccaaa cggttcagaa ataggaaacg tttgatcgca agaagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 452
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 452

atccgtcaca cctgctcttc ttgcgatcaa acgtttccta tttctgaacc gtttggtgtt 60

ggctcccgta t 71

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<210> SEQ ID NO 453
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 453

atacgggagc caacaccaga atatctaaaa taaaggaaag acaaccgcgg atgcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 454
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 454

atccgtcaca cctgctctgc atccgcggtt gtctttcctt tattttagat attctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 455
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 455

atacgggagc caacaccacg acgggcgtaa agaaataacc aatgctaccg ccacagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 456
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 456

atccgtcaca cctgctctgt ggcggtagca ttggttattt ctttacgccc gtcgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 457
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 457

atacgggagc caacaccaac gaataagtat ttaagacaga attagacact tagaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 458
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 458

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atccgtcaca cctgctcttc taagtgtcta attctgtctt aaatacttat tcgttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 459
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 459

atacgggagc caacaccata tacatactcc tcgctacaac cgctgcgccg gatcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 460
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 460

atccgtcaca cctgctctga tccggcgcag cggttgtagc gaggagtatg tatatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 461
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 461

atacgggagc caacaccaat ataagcgagg aggaaggcgg cgagctataa gtcagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 462
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 462

atccgtcaca cctgctctga cttatagctc gccgccttcc tcctcgctta tattggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 463
<211> LENGTH: 60
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 463

catacgggag ccaacaccac aaccattgcg ttactatctt cagagcaggt gtgacggatg 60

<210> SEQ ID NO 464
<211> LENGTH: 60
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 464

catccgtcac acctgctctg aagatagtaa cgcaatggtt gtggtgttgg ctcccgtatg 60

<210> SEQ ID NO 465
<211> LENGTH: 61
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 465

catacgggag ccaacaccac ccgtatcgtt cccaatgcac tcagagcagg tgtgacggat 60

g 61

<210> SEQ ID NO 466
<211> LENGTH: 61
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 466

catccgtcac acctgctctg agtgcattgg gaacgatacg ggtggtgttg gctcccgtat 60

g 61

<210> SEQ ID NO 467
<211> LENGTH: 60
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 467

catacgggag ccaacaccac gttcccatac aagttactga cagagcaggt gtgacggata 60

<210> SEQ ID NO 468
<211> LENGTH: 60
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 468

tatccgtcac acctgctctg tcagtaactt gtatgggaac gtggtgttgg ctcccgtatg 60

<210> SEQ ID NO 469
<211> LENGTH: 60
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 469

catacgggag ccaacaccac aatgtcttgc tcgtgtgtcc cagagcaggt gtgacggatg 60

<210> SEQ ID NO 470
<211> LENGTH: 60
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 470

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catccgtcac acctgctctg ggacacacga gcaagacatt gtggtgttgg ctcccgtatg 60

<210> SEQ ID NO 471
<211> LENGTH: 60
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 471

catacgggag ccaacaccac tctcagaatg ggtccaaccc cagagcaggt gtgacggatg 60

<210> SEQ ID NO 472
<211> LENGTH: 60
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 472

catccgtcac acctgctctg gggttggacc cattctgaga gtggtgttgg ctcccgtatg 60

<210> SEQ ID NO 473
<211> LENGTH: 60
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 473

catacgggag ccaacaccac gtgttgatgc ggggttctcg cagagcaggt gtgacggatg 60

<210> SEQ ID NO 474
<211> LENGTH: 60
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 474

catccgtcac acctgctctg cgagaacccc gcatcaacac gtggtgttgg ctcccgtatg 60

<210> SEQ ID NO 475
<211> LENGTH: 60
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 475

catacgggag ccaacaccac ccgcagcatc cataaacgag cagagcaggt gtgacggatg 60

<210> SEQ ID NO 476
<211> LENGTH: 60
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 476

catccgtcac acctgctctg ctcgtttatg gatgctgcgg gtggtgttgg ctcccgtatg 60

<210> SEQ ID NO 477
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence

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<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 477

atccgtcaca cctgctctat cgtgtcttat ttattctgct caatacgtta cgcttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 478
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 478

atacgggagc caacaccaag cgtaacgtat tgagcagaat aaataagaca cgatagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 479
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 479

atacgggagc caacaccaac ctggctatct gcatgcggtc ggtcgccttg ttggagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 480
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 480

atccgtcaca cctgctctcc aacaaggcga ccgaccgcat gcagatagcc aggttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 481
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 481

atccgtcaca cctgctcttc acgtgtagcg atgacagaat aaggattgaa agactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 482
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 482

atacgggagc caacaccagt ctttcaatcc ttattctgtc atcgctacac gtgaagagca 60

ggtgtgacgg at 72

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<210> SEQ ID NO 483
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 483

atccgtcaca cctgctctga ggtcgggtat tagtccgtat aaaccgagac tgaatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 484
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 484

atacgggagc caacaccatt cagtctcggt ttatacggac taatacccga cctcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 485
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 485

atacgggagc caacaccagc gatacacgtc catcgaacaa gttaaaactt agaaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 486
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 486

atccgtcaca cctgctcttt ctaagtttta acttgttcga tggacgtgta tcgctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 487
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 487

atacgggagc caacaccacg ggggcatctt ccattaaccc attacctcac cccaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 488
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 488

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atccgtcaca cctgctcttg gggtgaggta atgggttaat ggaagatgcc cccgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 489
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 489

atacgggagc caacaccacg cccacggcca cgcccgacga gctacccctc atcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 490
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 490

atccgtcaca cctgctcttg atgaggggta gctcgtcggg cgtggccgtg ggcgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 491
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 491

atccgtcaca cctgctctcg catctaacgt ctagactatc aaaagtcgtg ttaatggtgt 60

tggttccggt at 72

<210> SEQ ID NO 492
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 492

ataccggaac caacaccatt aacacgactt ttgatagtct agacgttaga tgcgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 493
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 493

atccgtcaca cctgctcttg gggtgaggta atgggttaat ggaagatgcc cccgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 494
<211> LENGTH: 72
<212> TYPE: DNA

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<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 494

atacgggagc caacaccacg ggggcatctt ccattaaccc attacctcac cccaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 495
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 495

atacgggagc caacaccaca aagtttagcg ttatgcaact ccccccttata ctcgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 496
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 496

atccgtcaca cctgctctcg agtataaggg ggagttgcat aacgctaaac tttgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 497
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 497

atacgggagc caacaccagt aattgtcact cacgcagatc ggtgactaca tagcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 498
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 498

atccgtcaca cctgctctgc tatgtagtca ccgatctgcg tgagtgacaa ttactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 499
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 499

atccgtcaca cctgctctgt gtactacttg caggaatggc aataggcgga aaggtggtgt 60

tggctcccgt at 72

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<210> SEQ ID NO 500
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 500

atacgggagc caacaccacc tttccgccta ttgccattcc tgcaagtagt acacagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 501
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 501

atccgtcaca cctgctctat gttgccggga agatatagtg aaaattcatg atatggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 502
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 502

atacgggagc caacaccata tcatgaattt tcactatatc ttcccggcaa catagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 503
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 503

atacgggagc caacaccact ggtgaggcgc ctgcgccgac tggccgtccc cccgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 504
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 504

atccgtcaca cctgctctcg gggggacggc cagtcggcgc aggcgcctca ccagtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 505
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 505

atccgtcaca cctgctctgg gtgagcgagt cggccccggg agcgaacggc ggcgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 506
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 506

atacgggagc caacaccacg ccgccgttcg ctcccggggc cgactcgctc acccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 507
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 507

atccgtcaca cctgctctca gcggcggcgg gcccgggcga tggaggtcct gacatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 508
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 508

atacgggagc caacaccatg tcaggacctc catcgcccgg gcccgccgcc gctgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 509
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 509

atccgtcaca cctgctcttt ccatgtatat tagatactcg gggcaagggg aaactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 510
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 510

atacgggagc caacaccagt ttccccttgc cccgagtatc taatatacat ggaaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 511
<211> LENGTH: 70

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<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 511

atccgtcaca cctgctctgg agcgatctaa ccctttttat caatcaattc ggtggtgttg 60

gctcccgtat 70

<210> SEQ ID NO 512
<211> LENGTH: 70
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 512

atacgggagc caacaccacc gaattgattg ataaaaaggg ttagatcgct ccagagcagg 60

tgtgacggat 70

<210> SEQ ID NO 513
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 513

atccgtcaca cctgctcttg ggacatttgt agtgcctgtt catgtatcgc agcctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 514
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 514

atacgggagc caacaccagg ctgcgataca tgaacaggca ctacaaatgt cccaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 515
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 515

atacgggagc caacaccacc cactctcccc ccgctcccgc tcccccgctc cgcgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 516
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 516

atccgtcaca cctgctctcg cggagcgggg gagcgggagc gggggggagag tgggtggtgt 60

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tggctcccgt at 72

<210> SEQ ID NO 517
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 517

atccgtcaca cctgctctac atcacatctg actgagtcca tggcgctctg tgtgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 518
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 518

atacgggagc caacaccaca cacagagcgc catggactca gtcagatgtg atgtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 519
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 519

atacgggagc caacaccatc ctcctgcggc gtctggagaa cagcctctac tttaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 520
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 520

atccgtcaca cctgctctta aagtagaggc tgttctccag acgccgcagg aggatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 521
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 521

atccgtcaca cctgctcttt ttggtattgt tggcggaagg cggtggttcg tgtctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 522
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 522

atacgggagc caacaccaga cacgaaccac cgccttccgc caacaatacc aaaaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 523
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 523

atacgggagc caacaccaat agtaccgcgc ccggcgaaaa agctccttta atacagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 524
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 524

atccgtcaca cctgctctgt attaaaggag ctttttcgcc gggcgcggta ctattggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 525
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 525

atacgggagc caacaccaat agatggataa gggggaaact gccattcggt tagtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 526
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 526

atccgtcaca cctgctctac taaccgaatg gcagtttccc ccttatccat ctattggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 527
<211> LENGTH: 70
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 527

atccgtcaca cctgctcttg ggtcggccgg gaccagcgcg gcggcctcct ggtggtgttg 60

gctcccgtat 70

<210> SEQ ID NO 528

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<211> LENGTH: 70
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 528

atacgggagc caacaccacc aggaggccgc cgcgctggtc ccggccgacc caagagcagg 60

tgtgacggat 70

<210> SEQ ID NO 529
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 529

atccgtcaca cctgctctat gttacaaccg ccacaagtag gtttgatacc cgggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 530
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 530

atacgggagc caacaccacc cgggtatcaa acctacttgt ggcggttgta acatagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 531
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 531

atacgggagc caacaccaca cacagagcgc atggactcag tcagatgtga tgtagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 532
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 532

atccgtcaca cctgctctac atcacatctg actgagtcca tgcgctctgt gtgtggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 533
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 533

atacgggagc caacaccatc actactttta taatttcatt cttctggcgt ccctagagca 60

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ggtgtgacgg at 72

<210> SEQ ID NO 534
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 534

atccgtcaca cctgctctag ggacgccaga agaatgaaat tataaaagta gtgatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 535
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 535

atccgtcaca cctgctcttg ttacaaccta gtacccggag ggggacccga ggagtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 536
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 536

atacgggagc caacaccact cctcgggtcc ccctccgggt actaggttgt aacaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 537
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 537

atccgtcaca cctgctctgt ttcttcaact tctgccttat ccccggtcgg tacgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 538
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 538

atacgggagc caacaccacg taccgaccgg ggataaggca gaagttgaag aaacagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 539
<211> LENGTH: 70
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:

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<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 539

atacgggagc caacaccatc acggcaatgt ccgataatgt cttgcttcag cgagagcagg 60

tgtgacggat 70

<210> SEQ ID NO 540
<211> LENGTH: 70
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 540

atccgtcaca cctgctctcg ctgaagcaag acattatcgg acattgccgt gatggtgttg 60

gctcccgtat 70

<210> SEQ ID NO 541
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 541

atccgtcaca cctgctctga ggaatatgac gcggcaatag tgaaccagtc aaactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 542
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 542

atacgggagc caacaccagt ttgactggtt cactattgcc gcgtcatatt cctcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 543
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 543

atccgtcaca cctgctctgc atggccatcc agattagtct tgcagcacat tcggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 544
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 544

atacgggagc caacaccacc gaatgtgctg caagactaat ctggatggcc atgcagagca 60

ggtgtgacgg at 72

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<210> SEQ ID NO 545
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 545

atacgggagc caacaccaca cctggtaaat ttaccacggc ttacttgctc agatagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 546
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 546

atccgtcaca cctgctctat ctgagcaagt aagccgtggt aaatttacca ggtgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 547
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 547

atacgggagc caacaccagc acacggcacg cccctccgaa ccacgccccc gaaagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 548
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 548

atccgtcaca cctgctcttt cgggggcgtg gttcggaggg gcgtgccgtg tgctggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 549
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 549

atacgggagc caacaccatc caatgaggcc atggaccggt aaactcggac gcgcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 550
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 550

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atccgtcaca cctgctctgc gcgtccgagt ttaccggtcc atggcctcat tggatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 551
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 551

atacgggagc caacaccaca cgccacaaac cccactccgt gccgtgcccg ccccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 552
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 552

atccgtcaca cctgctctgg ggcgggcacg gcacggagtg gggtttgtgg cgtgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 553
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 553

atacgggagc caacaccacc tggagcccag cctgtactca tctcaccgcc gtccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 554
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 554

atccgtcaca cctgctctgg acggcggtga gatgagtaca ggctgggctc caggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 555
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 555

atacgggagc caacaccagg cgccgtacag cggtccgcta ccgacctatt gtgtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 556
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence

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<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 556

atccgtcaca cctgctctac acaataggtc ggtagcggac cgctgtacgg cgcctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 557
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 557

atacgggagc caacaccata cgtcccacaa agcgatcggc tggatacttc gtcagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 558
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 558

atccgtcaca cctgctctga cgaagtatcc agccgatcgc tttgtgggac gtatggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 559
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 559

atacgggagc caacaccaca gaatgtcgat gcacagggga attcggtgcg cccgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 560
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 560

atccgtcaca cctgctctcg ggcgcaccga attcccctgt gcatcgacat tctgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 561
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 561

atacgggagc caacaccact ctagctgaca ggtgcatacg atacccgacg cttcagagca 60

ggtgtgacgg at 72

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<210> SEQ ID NO 562
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 562

atccgtcaca cctgctctga agcgtcgggt atcgtatgca cctgtcagct agagtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 563
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 563

atacgggagc caacaccagg tccgtcaaac gttacgtagg aggcatatca cggtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 564
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 564

atccgtcaca cctgctctac cgtgatatgc ctcctacgta acgtttgacg gacctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 565
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 565

atacgggagc caacaccatg catacgaggc caccactcag aaagatatgt gggcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 566
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 566

atccgtcaca cctgctctgc ccacatatct ttctgagtgg tggcctcgta tgcatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 567
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 567

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atacgggagc caacaccagc ccactgccac gatatatgcg caaccgttgt ccgcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 568
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 568

atccgtcaca cctgctctgc ggacaacggt tgcgcatata tcgtggcagt gggctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 569
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 569

atacgggagc caacaccaac cgacaccccc gcccagcccc atcctgcccg gtccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 570
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 570

atccgtcaca cctgctctgg accgggcagg atggggctgg gcgggggtgt cggttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 571
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 571

atacgggagc caacaccatg cggggagcaa tgtaggtctt agtaccacgt ggccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 572
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 572

atccgtcaca cctgctctgg ccacgtggta ctaagaccta cattgctccc cgcatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 573
<211> LENGTH: 72
<212> TYPE: DNA

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<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 573

atacgggagc caacaccagc cgtactaggc ccgaagtcag gtgtaggatt ggccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 574
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 574

atccgtcaca cctgctctgg ccaatcctac acctgacttc gggcctagta cggctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 575
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 575

atacgggagc caacaccaca tcccacacac gaacagtacc ttgccacccc cgccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 576
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 576

atccgtcaca cctgctctgg cgggggtggc aaggtactgt tcgtgtgtgg gatgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 577
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 577

atacgggagc caacaccacc tgtccacttt ggcacgcgcg ccactcagtc ctccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 578
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 578

atccgtcaca cctgctctgg aggactgagt ggcgcgcgtg ccaaagtgga caggtggtgt 60

tggctcccgt at 72

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<210> SEQ ID NO 579
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 579

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacgcgt gtcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 580
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 580

atccgtcaca cctgctcttg acacgcgtac gggtccggac atgtcataac ggactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 581
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 581

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacgcgt gtcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 582
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 582

atccgtcaca cctgctcttg acacgcgtac gggtccggac atgtcataac ggactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 583
<211> LENGTH: 59
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 583

atacgggagc caacaccaca agcaggaata agcgccggtc cagagcaggt gtgacggat 59

<210> SEQ ID NO 584
<211> LENGTH: 59
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 584

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atccgtcaca cctgctctgg accggcgctt attcctgctt gtggtgttgg ctcccgtat 59

<210> SEQ ID NO 585
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 585

atacgggagc caacaccagc gaactgaaaa cgcttaaagg agaccaatga ccgaagagca 60

ggtgtgacgg a 71

<210> SEQ ID NO 586
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 586

atccgtcaca cctgctcttc ggtcattggt ctcctttaag cgttttcagt tcgctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 587
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 587

atacgggagc caacaccaag tcatgccgaa gtagggtaac gtctgaatgg tagaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 588
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 588

atccgtcaca cctgctcttc taccattcag acgttaccct acttcggcat gacttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 589
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 589

atacgggagc caacaccact cgtaatcctt taatacacct attgcaacaa tgctagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 590
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 590

atccgtcaca cctgctctag cattgttgca ataggtgtat taaaggatta cgagtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 591
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 591

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacgcgt gtcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 592
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 592

atccgtcaca cctgctcttg acacgcgtac gggtccggac atgtcataac ggactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 593
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 593

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacgcgt gtcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 594
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 594

atccgtcaca cctgctcttg acacgcgtac gggtccggac atgtcataac ggactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 595
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 595

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacgcgt gtcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 596

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<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 596

atccgtcaca cctgctcttg acacgcgtac gggtccggac atgtcataac ggactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 597
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 597

atacgggagc caacaccaca ctaccgtccc acccccтccc agctcctccg gccgagagca 60

ggtgtgacgg a 71

<210> SEQ ID NO 598
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 598

atccgtcaca cctgctctcg gccggaggag ctgggagggg gtgggacggt agtgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 599
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 599

atacgggagc caacaccaag gggcaactcg aacccgggcg ataccgagac tgacagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 600
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 600

atccgtcaca cctgctctgt cagtctcggt atcgcccggg ttcgagttgc cccttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 601
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 601

atacgggagc caacaccacg atcctactca tacggagccc tggctgactc gcgcagagca 60

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ggtgtgacgg at 72

<210> SEQ ID NO 602
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 602

atccgtcaca cctgctctgc gcgagtcagc cagggctccg tatgagtagg atcgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 603
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 603

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacgcgt gtcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 604
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 604

atccgtcaca cctgctcttg acacgcgtac gggtccggac atgtcataac ggactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 605
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 605

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacgcgt gtcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 606
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 606

atccgtcaca cctgctcttg acacgcgtac gggtccggac atgtcataac ggactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 607
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:

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<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 607

atacgggagc caacaccact gaaaacttat gaaatgccgg tcgcagattt tgtcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 608
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 608

atccgtcaca cctgctctga caaaatctgc gaccggcatt tcataagttt tcagtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 609
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 609

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacgcgt gtcagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 610
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 610

atccgtcaca cctgctctga cacgcgtacg ggtccggaca tgtcataacg gactggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 611
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 611

atacgggagc caacaccaca ctaccgtccc acccccctccc agctcctccg gccgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 612
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 612

atccgtcaca cctgctctcg gccggaggag ctgggagggg gtgggacggt agtgtggtgt 60

tggctcccgt at 72

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<210> SEQ ID NO 613
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 613

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacgcgt gtcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 614
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 614

atccgtcaca cctgctcttg acacgcgtac gggtccggac atgtcataac ggactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 615
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 615

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacgcgt gtcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 616
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 616

atccgtcaca cctgctcttg acacgcgtac gggtccggac atgtcataac ggactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 617
<211> LENGTH: 58
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 617

atacgggagc caacaccacc gcaacacact atccacgacc agagcaggtg tgacggat 58

<210> SEQ ID NO 618
<211> LENGTH: 58
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 618

atccgtcaca cctgctctgg tcgtggatag tgtgttgcgg tggtgttggc tcccgtat 58

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<210> SEQ ID NO 619
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 619

atacgggagc caacaccacc gcccgcctcc tggcgccaca cccccgccgc agcgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 620
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 620

atccgtcaca cctgctctcg ctgcggcggg ggtgtggcgc caggaggcgg gcggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 621
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 621

atacgggagc caacaccaaa tacagtgcct aataggtatg aaaattatag taatagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 622
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 622

atccgtcaca cctgctctat tactataatt ttcataccta ttaggcactg tatttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 623
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 623

atacgggagc caacaccaca ctaccgtccc acccccтccc agctcctccg gccgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 624
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 624

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atccgtcaca cctgctctcg gccggaggag ctgggagggg gtgggacggt agtgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 625
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 625

atacgggagc caacaccact agttatttca taggggaaat taacaaattt tgacagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 626
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 626

atccgtcaca cctgctctgt caaaatttgt taatttcccc tatgaaataa ctagtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 627
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 627

atacgggagc caacaccacg gacaatctgg tagtagtaaa caatatataa gtatagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 628
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 628

atccgtcaca cctgctctat acttatatat tgtttactac taccagattg tccgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 629
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 629

atacgggagc caacaccagt actcgctgtg gcaaaagcag catttcgtct atctagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 630
<211> LENGTH: 72
<212> TYPE: DNA

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<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 630

atccgtcaca cctgctctag atagacgaaa tgctgctttt gccacagcga gtactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 631
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 631

atacgggagc caacaccaaa gctccccccc tcatccctgg catctccgct aaccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 632
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 632

atccgtcaca cctgctctgg ttagcggaga tgccagggat gagggggggga gctttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 633
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 633

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacgcgt gtcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 634
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 634

atccgtcaca cctgctcttg acacgcgtac gggtccggac atgtcataac ggactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 635
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 635

atacgggagc caacaccatt aacgtcgcaa tagcgctcat ctaacgtcaa gggcagagca 60

ggtgtgacgg at 72

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<210> SEQ ID NO 636
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 636

atccgtcaca cctgctctgc ccttgacgtt agatgagcgc tattgcgacg ttaatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 637
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 637

atacgggagc caacaccaaa gtgtcgtaat ttaagatgca tacgcatgcc gttaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 638
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 638

atccgtcaca cctgctctta acggcatgcg tatgcatctt aaattacgac actttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 639
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 639

atacgggagc caacaccagt gtcttatgaa tgtagatgag ctcagatcgg aattagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 640
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 640

atccgtcaca cctgctctaa ttccgatctg agctcatcta cattcataag acactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 641
<211> LENGTH: 78
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 641

atacgggagc caacaccaca catcacatac cttcaagagc gatgacggcc ctttataggc 60

agagcaggtg tgacggat 78

<210> SEQ ID NO 642
<211> LENGTH: 78
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 642

atccgtcaca cctgctctgc ctataaaggg ccgtcatcgc tcttgaaggt atgtgatgtg 60

tggtgttggc tcccgtat 78

<210> SEQ ID NO 643
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 643

atacgggagc caacaccaca ctaccgtccc acccctccc agctcctccg gccgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 644
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 644

atccgtcaca cctgctctcg gccggaggag ctgggagggg gtgggacggt agtgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 645
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 645

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacgcgt gtcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 646
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 646

atccgtcaca cctgctcttg acacgcgtac gggtccggac atgtcataac ggactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 647
<211> LENGTH: 72

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<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 647

atacgggagc caacaccaat gtggtggata gcaaaccccc gacgattgag gattagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 648
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 648

atccgtcaca cctgctctaa tcctcaatcg tcgggggttt gctatccacc acattggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 649
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 649

atacgggagc caacaccagt tgaagctagt actgcggaag catagtccat aagtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 650
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 650

atccgtcaca cctgctctac ttatggacta tgcttccgca gtactagctt caactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 651
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 651

atacgggagc caacaccagc gaaatgaagg tatgtttttg aataataatg tggcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 652
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 652

atccgtcaca cctgctctgc cacattatta ttcaaaaaca taccttcatt tcgctggtgt 60

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tggctcccgt at 72

<210> SEQ ID NO 653
<211> LENGTH: 73
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 653

atacgggagc caacaccaaa atagatcaaa accgcatgct ggagcagttt tagcaagagc 60

aggtgtgacg gat 73

<210> SEQ ID NO 654
<211> LENGTH: 73
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 654

atccgtcaca cctgctcttg ctaaaactgc tccagcatgc ggttttgatc tattttggtg 60

ttggctcccg tat 73

<210> SEQ ID NO 655
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 655

atacgggagc caacaccaat aattgctcgt tgatacttat ataaagtaca ggcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 656
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 656

atccgtcaca cctgctcttg cctgtacttt atataagtat caacgagcaa ttattggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 657
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 657

atacgggagc caacaccatc caatgaggcc atggaccggt aaactcggac gcgcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 658
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 658

atccgtcaca cctgctctgc gcgtccgagt ttaccggtcc atggcctcat tggatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 659
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 659

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacgcgt gtcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 660
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 660

atccgtcaca cctgctcttg acacgcgtac gggtccggac atgtcataac ggactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 661
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 661

atacgggagc caacaccaag acgataagaa taatatcgaa aatatatgtt ttcagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 662
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 662

atccgtcaca cctgctctga aaacatatat tttcgatatt attcttatcg tcttggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 663
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 663

atacgggagc caacaccagc ctcgccttca gatgttcact gctgtttatt gcatagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 664

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<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 664

atccgtcaca cctgctctat gcaataaaca gcagtgaaca tctgaaggcg aggctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 665
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 665

atacgggagc caacaccaat agatggataa gggggaaact gccattcggt tagtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 666
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 666

atccgtcaca cctgctctac taaccgaatg gcagtttccc ccttatccat ctattggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 667
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 667

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacgcgt gtcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 668
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 668

atccgtcaca cctgctcttg acacgcgtac gggtccggac atgtcataac ggactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 669
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 669

atacgggagc caacaccagg actcgcgcaa ataattttta tacgcaccac ttcagagcag 60

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gtgtgacgga t 71

<210> SEQ ID NO 670
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 670

atccgtcaca cctgctctga agtggtgcgt ataaaaatta tttgcgcgag tcctggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 671
<211> LENGTH: 73
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 671

atacgggagc caacaccagt ccgttatgac atgtccggac cccgtacgcg tgtcaagagc 60

aggtgtgacg gat 73

<210> SEQ ID NO 672
<211> LENGTH: 73
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 672

atccgtcaca cctgctcttg acacgcgtac ggggtccgga catgtcataa cggactggtg 60

ttggctcccg tat 73

<210> SEQ ID NO 673
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 673

atacgggagc caacaccata aagctcgtat tgccaccccc ctgttattta atacagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 674
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 674

atccgtcaca cctgctctgt attaaataac agggggggtgg caatacgagc tttatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 675
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:

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<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 675

atacgggagc caacaccatc acggcaatgt cccgataatg tcttgcttca gcgagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 676
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 676

atccgtcaca cctgctctcg ctgaagcaag acattatcgg gacattgccg tgatggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 677
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 677

atacgggagc caacaccagc agtactaacc ccccttacca tatatatcac acgagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 678
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 678

atccgtcaca cctgctctcg tgtgatatat atggtaaggg gggttagtac tgctggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 679
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 679

atacgggagc caacaccacc ctaaattcca gagtgtacaa gagaacgaac taccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 680
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 680

atccgtcaca cctgctctgg tagttcgttc tcttgtacac tctggaattt agggtggtgt 60

tggctcccgt at 72

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<210> SEQ ID NO 681
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 681

atacgggagc caacaccata gcgacttggc aaaaaattta catccattac tccagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 682
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 682

atccgtcaca cctgctctgg agtaatggat gtaaattttt tgccaagtcg ctatggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 683
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 683

atacgggagc caacaccacg tacacaaacc aaatacgcac cttcccaccc tccagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 684
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 684

atccgtcaca cctgctctgg agggtgggaa ggtgcgtatt tggtttgtgt acgtggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 685
<211> LENGTH: 59
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 685

atacgggagc caacaccaca tctagcacga gaccctatcc cagagcaggt gtgacggat 59

<210> SEQ ID NO 686
<211> LENGTH: 59
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 686

atccgtcaca cctgctctgg atagggtct cgtgctagat gtggtgttgg ctcccgtat 59

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<210> SEQ ID NO 687
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 687

atacgggagc caacaccaaa tcgtcaacag ccctgcgcca cttatctttt tgccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 688
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 688

atccgtcaca cctgctctgg caaaaagata agtggcgcag ggctgttgac gatttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 689
<211> LENGTH: 73
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 689

atacgggagc caacaccaac agatggataa gggggaaact gcccattcgg ttagtagagc 60

aggtgtgacg gat 73

<210> SEQ ID NO 690
<211> LENGTH: 73
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 690

atccgtcaca cctgctctac taaccgaatg ggcagtttcc cccttatcca tctgttggtg 60

ttggctcccg tat 73

<210> SEQ ID NO 691
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 691

atacgggagc caacaccacg cagttataac ggcaggcccc atatcgttta accagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 692
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 692

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atccgtcaca cctgctctgg ttaaacgata tggggcctgc cgttataact gcgtggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 693
<211> LENGTH: 68
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 693

atacgggagc caacaccatg tcaggacctc catcgcccgg gcccgccgcc gctgagagca 60

ggtgtgac 68

<210> SEQ ID NO 694
<211> LENGTH: 68
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 694

gtcacacctg ctctcagcgg cggcgggccc gggcgatgga ggtcctgaca tggtgttggc 60

tcccgtat 68

<210> SEQ ID NO 695
<211> LENGTH: 70
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 695

atacgggagc caacaccata acaaataacc accctcaatg ctagatagtg gcagagcagg 60

tgtgacggat 70

<210> SEQ ID NO 696
<211> LENGTH: 70
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 696

atccgtcaca cctgctctgc cactatctag cattgagggt ggttatttgt tatggtgttg 60

gctcccgtat 70

<210> SEQ ID NO 697
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 697

atacggcagc caacaccaca cacatagcgc tttgtattca gccggatgtg atgtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 698
<211> LENGTH: 72
<212> TYPE: DNA

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<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 698

atccgtcaca cctgctctac atcacatccg gctgaataca aagcgctatg tgtgtggtgt 60

tggctgccgt aa 72

<210> SEQ ID NO 699
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 699

atacgggagc caacaccaca cacagagcgc catggactca gtcagatgtg atgtagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 700
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 700

atccgtcaca cctgctctac atcacatctg actgagtcca tggcgctctg tgtgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 701
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 701

atacgggagc caacgccaca ggcgtgacat cacccgtacc ctaccttagt gccagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 702
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 702

atccgtcaca cctgctctgg cactaaggta gggtacgggt gatgtcacgc ctgtggcgtt 60

ggctcccgta t 71

<210> SEQ ID NO 703
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 703

atacgggagc caacaccata attcaagagg attcctcaaa atatgaagct tccagagcag 60

gtgtgacgga t 71

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<210> SEQ ID NO 704
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 704

atccgtcaca cctgctctgg aagcttcata ttttgaggaa tcctcttgaa ttatggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 705
<211> LENGTH: 73
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 705

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacgcgt gtcaaagagc 60

aggtgtgacg gat 73

<210> SEQ ID NO 706
<211> LENGTH: 73
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 706

atccgtcaca cctgctcttt gacacgcgta cgggtccgga catgtcataa cggactggtg 60

ttggctcccg tat 73

<210> SEQ ID NO 707
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 707

atacgggagc caacaccata tcttatcata atgtgatgct aagaaggatc ctttagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 708
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 708

atccgtcaca cctgctctaa aggatccttc ttagcatcac attatgataa gatatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 709
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 709

atacgggagc caacaccaga ttgatgtaag tagccctcaa atgatttaaa gtttagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 710
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 710

atccgtcaca cctgctctaa actttaaatc atttgagggc tacttacatc aatctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 711
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 711

atacgggagc caacaccaca ctaatttatc gcatgcatcg cccgctgatg cccaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 712
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 712

atccgtcaca cctgctcttg ggcatcagcg ggcgatgcat gcgataaatt agtgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 713
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 713

atacgggagc caacaccaca gaagttattt tgagaacgcg acccaaatag gttaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 714
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 714

atccgtcaca cctgctctta acctatttgg gtcgcgttct caaaataact tctgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 715
<211> LENGTH: 72

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<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 715

atacgggagc caacaccatt aatgtagaac accactctta ttgacaagcc tattagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 716
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 716

atccgtcaca cctgctctaa taggcttgtc aataagagtg gtgttctaca ttaatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 717
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 717

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacgcgt gtcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 718
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 718

atccgtcaca cctgctcttg acacgcgtac gggtccggac atgtcataac ggactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 719
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 719

atacgggagc caacaccaca gtttgtagtg taacaatgct agataataat gaaaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 720
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 720

atccgtcaca cctgctcttt tcattattat ctagcattgt tacactacaa actgtggtgt 60

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tggctcccgt at 72

<210> SEQ ID NO 721
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 721

atacgggagc caacaccaag caaatcacca gaaatctttt aacaatctat tgacagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 722
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 722

atccgtcaca cctgctctgt caatagattg ttaaaagatt tctggtgatt tgcttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 723
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 723

atacgggagc caacaccaca caggaactag aagaaagtat ctttttttcga tttaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 724
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 724

atccgtcaca cctgctctta aatcgaaaaa agatactttc ttctagttcc tgtgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 725
<211> LENGTH: 59
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 725

atacgggagc caacaccaca tctagcacga gaccctatcc cagagcaggt gtgacggat 59

<210> SEQ ID NO 726
<211> LENGTH: 59
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 726

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atccgtcaca cctgctctgg gatagggtct cgtgctagat gtggtgttgg ctcccgtat 59

<210> SEQ ID NO 727
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 727

atacgggagc cagcaccatt ccgttatgac gtgtccggac ccgttcgcgc gtcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 728
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 728

atccgtcaca cctgctcttg acgcgcgaac gggtccggac acgtcataac ggaatggtgc 60

tggctcccgt aa 72

<210> SEQ ID NO 729
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 729

atacgggagc caacaccatc acggcaatgt cccgataatg tcttgcttca gcgagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 730
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 730

atccgtcaca cctgctctcg ctgaagcaag acattatcgg gacattgccg tgatggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 731
<211> LENGTH: 55
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 731

atacgggagc caacaccagt ccgttatgac attgtcaaga gcaggtgtga cggat 55

<210> SEQ ID NO 732
<211> LENGTH: 55
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 732

atccgtcaca cctgctcttg acaatgtcat aacggactgg tgttggctcc cgtat 55

<210> SEQ ID NO 733
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 733

atacgggagc caacaccaca tactcagacg attacccagc gcatgcttgt aacagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 734
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 734

atccgtcaca cctgctctgt tacaagcatg cgctgggtaa tcgtctgagt atgtggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 735
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 735

atacgggagc caacaccact ctctagccca cggcggggtt ttctcgcaag tccagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 736
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 736

atccgtcaca cctgctctgg acttgcgaga aaaccccgcc gtgggctaga gagtggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 737
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 737

atacgggagc caacaccaat tgcgccctaa ggctacccac attacccatg tgtagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 738
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence

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<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 738

atccgtcaca cctgctctac acatgggtaa tgtgggtagc cttagggcgc aattggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 739
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 739

atacgggagc caacaccagc tgctgcttca acgaaatccc aggcaccctg acaagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 740
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 740

atccgtcaca cctgctcttg tcagggtgcc tgggatttcg ttgaagcagc agctggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 741
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 741

atacgggagc caacaccagt acctgatacc ggggtacata aacaccaaca tctagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 742
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 742

atccgtcaca cctgctctag atgttggtgt ttatgtaccc cggtatcagg tactggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 743
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 743

atacgggagc caacaccaga taccgtgaat atactaattt cgcaatagtt aatagagcag 60

gtgtgacgga t 71

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<210> SEQ ID NO 744
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 744

atccgtcaca cctgctctat taactattgc gaaattagta tattcacggt atctggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 745
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 745

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacgcgt gtcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 746
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 746

atccgtcaca cctgctcttg acacgcgtac gggtccggac atgtcataac ggactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 747
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 747

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacgcgt gtcaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 748
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 748

atccgtcaca cctgctcttg acacgcgtac gggtccggac atgtcataac ggactggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 749
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 749

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atacgggagc caacaccagt ccgtttgaca tgtccggacc cgtacgcgtg tcaagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 750
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 750

atccgtcaca cctgctcttg acacgcgtac gggtccggac atgtcaaacg gactggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 751
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 751

atacgggagc caacaccatc acggcaatgt cccgataatg tcttgcttca gcgagagcag 60

gtgtgacgga t 71

<210> SEQ ID NO 752
<211> LENGTH: 71
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 752

atccgtcaca cctgctctcg ctgaagcaag acattatcgg gacattgccg tgatggtgtt 60

ggctcccgta t 71

<210> SEQ ID NO 753
<211> LENGTH: 65
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 753

atacgggagc caacaccagt ccgttatgac atgtccggac ccgtacaaga gcaggtgtga 60

cggat 65

<210> SEQ ID NO 754
<211> LENGTH: 65
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 754

atccgtcaca cctgctcttg tacgggtccg gacatgtcat aacggactgg tgttggctcc 60

cgtat 65

<210> SEQ ID NO 755
<211> LENGTH: 72
<212> TYPE: DNA

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<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 755

atacgggagc caacaccaag tccaagccaa acaagagcat aacaccaaat ctggagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 756
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 756

atccgtcaca cctgctctcc agatttggtg ttatgctctt gtttggcttg gacttggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 757
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 757

atacgggagc caacaccact cggcaccgcc cttccgtatc ggcgagtaac gtacagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 758
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 758

atccgtcaca cctgctctgt acgttactcg ccgatacgga agggcggtgc cgagtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 759
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 759

atacgggagc caacaccacc gcaggagtcc atcaggggtt ggcagtcagc gctcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 760
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 760

atccgtcaca cctgctctga gcgctgactg ccaacccctg atggactcct gcggtggtgt 60

tggctcccgt at 72

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<210> SEQ ID NO 761
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 761

atacgggagc caacaccaca cgaacggagt gcaccgggga agatactcca acgcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 762
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 762

atccgtcaca cctgctctgc gttggagtat cttccccggt gcactccgtt cgtgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 763
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 763

atacgggagc caacaccagc caattataca ggtaggtcaa aaaagtttag gggaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 764
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 764

atccgtcaca cctgctcttc ccctaaactt ttttgaccta cctgtataat tggctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 765
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 765

atacgggagc caacaccacc atgccccttt aagtgaatag actagtggcc gttgagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 766
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

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<400> SEQUENCE: 766

atccgtcaca cctgctctca acggccacta gtctattcac ttaaaggggc atggtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 767
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 767

atacgggagc caacaccaga gacgtcttag cctcgcgatc ccgtccgttg gcccagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 768
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 768

atccgtcaca cctgctctgg gccaacggac gggatcgcga ggctaagacg tctctggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 769
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 769

atacgggagc caacaccatc ctcccgcgac gtctggagaa cagcctctac tttaagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 770
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 770

atccgtcaca cctgctctta aagtagaggc tgttctccag acgtcgcggg aggatggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 771
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 771

atacgggagc caacaccaca cacagagcgc catggactca gtcagatgtg atgtagagca 60

ggtgtgacgg at 72

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<210> SEQ ID NO 772
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 772

atccgtcaca cctgctctac atcacatctg actgagtcca tggcgctctg tgtgtggtgt 60

tggctcccgt at 72

<210> SEQ ID NO 773
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 773

atacgggagc caacaccatt gacttggccg tctctgaccc ctagcacccc tcgcagagca 60

ggtgtgacgg at 72

<210> SEQ ID NO 774
<211> LENGTH: 72
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: chemically synthesized

<400> SEQUENCE: 774

atccgtcaca cctgctctgc gaggggtgct aggggtcaga gacggccaag tcaatggtgt 60

tggctcccgt at 72

I claim:

1. A DNA ligand sequence consisting of SEQ ID NO: 307.

2. A DNA ligand sequence consisting of SEQ ID NO.: 516.

3. A DNA ligand sequence consisting of SEQ ID No.: 577.

* * * * *